

## VEGETABLE WEED MANAGEMENT

### ARTICHOKES

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE:</b>			
pronamide @ 2-4 lbs/A	Kerb 50 W @ 4-8 lb/A	Broadleaf weeds and annual grasses	Apply after transplanting but before new shoots develop 3-4 new leaves. Do not apply within 60 days of harvest. Refer to label for plant back restrictions.
<b>POSTEMERGENCE:</b>			
sethoxydim @ 0.09-0.47 lb/A	Poast @ 0.5-2.5 pts/A  Mix with COC @ 2 pts/A  Pump up sprayer: 1/3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses	Consult label for recommended adjuvants and rates. Do not apply within 7 days of harvest. Use with caution when temperatures exceed 90 degrees F and relative humidity is 60% or higher because of potential leaf injury. Not recommended when temperatures exceed 100 degrees F.
<b>DIRECTED POSTEMERGENCE:</b>			
oxyfluorfen @ 1-1.5lbs/A	Goal @ 4-6 pts/A Goaltender @ 2-3 pts/A Galigan @ 4-6 pts/A Galigan H2O @ 2-3 pts/A	Broadleaf weeds preemergence to 8 leaf stage	<b>DO APPLY OVER THE TOP.</b> Apply as a directed spray to the soil surface between rows and at the base of the plant in 40 GPA. Separate applications by 8 to 10 weeks or a single application can be made. 5 DTH Check label for rates.
pronamide @ 2-4 lbs/A	Kerb 50 W @ 4-8 lb/A	Broadleaf weeds and annual grasses	Application maybe directed to soil surface between the rows. Consult label for recommended adjuvants. Do not apply within 60 days of harvest. Refer to label for plant back restrictions.
paraquat @ 0.63-1.0 lbs/A	Gramoxone Inteon @ 2.5-4 pts/A Firestorm @ 1.7-2.7 pts/A Parazone @ 1.7-2.7 pts/A  Mix with NIS @ 1-2 pts/100 gal or with COC @ 1 gal/100 gal	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennial weeds.	Apply to row middles using a hooded sprayer in a minimum of 20 gal. of water/A. Surfactant is required; consult labels. Do not apply within 24 hours of harvest. Don't exceed 3 applications/year.
glyphosate @ 0.5-1.4 lbs/A	Roundup Weathermax @ 11-32 oz/A  Various 4 L brands @ 16-45 oz/A Various 5 L brands @ 11-32 oz/A	Most emerged weeds	Apply to row middles using a hooded or shielded sprayer or a wiper applicator. To avoid injury keep herbicide off foliage, shoots, stems, exposed roots and fruit. Do not apply within 14 days of harvest.

## VEGETABLE WEED MANAGEMENT

### ASPARAGUS

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE:</b>			
diuron @ 0.75-3.0 lbs/A	Direx 4 L, Diuron 4L @ 1.5-3 pt/A on light soil 3-6 pt/A on clay soil	Annual broadleaf and grass weeds	No earlier than 4 weeks before spear emergence and no later than early spear emergence. Do not apply to young plants during first growing season after setting or on plants with exposed roots. Check label for tank-mixes with other herbicides.
	Direx 80DF, Diuron 80WP, Karmex 80DF @ 1-2 lb/A on light soil 2-4 lb/A clay		
linuron @ 1.0-2.0 lbs/A	Lorox 50 DF @ 2-4 lb/A	Most small seeded annual grasses and broadleaf weeds.	Established beds apply before cutting season. Lorox can be used on newly planted crowns. 1 day to harvest.
paraquat @ 0.63-1.0 lbs/A	Gramoxone Inteon @ 2.5-4 pts/A Firestorm @ 1.7-2.7 pts/A Parazone @ 1.7-2.7 pts/A	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennial weeds.	Apply in a minimum of 20 gallons water/A to control emerged weeds before spears emerge or after last harvest.
	Mix with NIS @ 1-2 pts/100 gal or with COC @ 1 gal/100 gal		
metribuzin @ 1-2 lbs/A	Sencor 4 FL@ 2-4 pt/A Sencor 75DF, Metribuzin 75DF @ 1.33-2.67 lb/A	Annual broadleaf weeds and grasses	Early spring before spears and ferns emerge. Do not use on young plants during first growing season after setting crowns.
terbacil @ 0.8-2 lbs/A	Sinbar WP @ 1.5-2.5 lbs/A	Annual broadleaf weeds and grasses	Use only on established beds. Apply prior to spear and weed emergence or to small weeds. Do not use on areas where subsoil or roots are exposed.
norflurazon @ 2-4 lbs/A	Solicam DF @ 2.5-5 lbs/A	Most small seeded annual grasses and broadleaf weeds. Fair on nutsedge.	Use on plantings that have been established for at least one year.
flumioxazin 0.188 lbs/A	Chateau @ 6 oz/A	Annual grasses and broadleaf weeds	Apply only to dormant asparagus no sooner than 14 days before spears emerge or after last harvest. Do not apply more than 6 oz/A during a single growing season. Provides residual weed control. Can be tank mixed with paraquat for control of emerged weeds. Apply in a minimum of 15 GPA.
	NIS at 1 quart/100 gals if weeds are present		
<b>POSTEMERGENCE:</b>			
diuron @ 0.75-3.0 lbs/A	Direx 4 L, Diuron 4L @ 1.5-3 pt/A on light soil 3-6 pt/A on clay soil 80 DF - Direx, Diuron, Karmex @ 1-2 lb/A on light soil 2-4 lb/A clay	Annual broadleaf and grass weeds	Early spear emergence; second application immediately following harvest. Do not apply to young plants during first growing season or on plants with exposed roots. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

### ASPARAGUS

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
halosulfuron @ 0.024-0.072 oz/A	Sandea 75 DF @ 0.5-1.5 oz./A	Yellow and purple nutsedge. Several broadleaf weeds.	Apply before or during harvest. Do not use NIS or COC because unacceptable crop injury may occur. Contact with ferns may result in temporary yellowing. Under heavy nutsedge pressure, use split applications. Do not exceed 2 oz/A/year.
fluzazifop-P-butyl @ 0.1-0.375 lb/A	Fusilade DX @ 0.375 – 1.5 pt/A	Annual and perennial grasses	Apply to actively growing grasses before they exceed the recommended growth stages shown on the label. One day to harvest. Make sequential applications at least 14 days apart. Max use rate is 3 pts/season.
paraquat @ 0.63-1.0 lbs/A	Mix with COC @ 1-2 pts/25 gal or with NIS @ 0.5-1 pt/25 gal Gramoxone Inteon @ 2.5-4 pts/A Firestorm @ 1.7-2.7 pts/A Parazone @ 1.7-2.7 pts/A	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennial weeds.	Surfactant required; check label for recommendations. Apply in a minimum of 20 gallons water/A. Use on asparagus at least 2 years old. Do not apply within 6 days of harvest.
sethoxydim @ 0.09 -0.47 lbs/A	Mix with NIS @ 1-2 pts/100 gal Poast 1.5 EC @ 0.5-2.5 pts/A	Annual and perennial grasses	Apply to grasses before they exceed the recommended growth stages. One day to harvest. Don't apply more than 5 pts/season. Should be used with caution when temperatures exceed 90 degrees and relative humidity is 60% or higher.
clethodim @ 0.1-.125 lb /A	Pump up sprayer: 1/3-2 oz/gal Poast + 1.3 oz/A gal COC Select Max @ 12-16 oz/A Mix with NIS @ 2pt /100 gals	Annual and perennial grasses and annual blue grass	Check label for rates and restrictions on amount applied. For repeat applications, make on a minimum of a 14-day interval. I DTH
<b>DIRECTED POSTEMERGENCE:</b>			
linuron @ 0.5-1.0 lbs/A	Lorox 50 DF @ 1-2 lb/A	Most small seeded annual grasses and broadleaf weeds.	Established beds. Apply as a directed spray to base of ferns. Lorox can be used on newly planted crowns. Do not apply within one day of harvest.
glyphosate @ 0.5-1.4 lbs/A	Various 4 L brands @ 16-45 oz/A Various 5 L brands @ 11-32 oz/A	Most emerged weeds	Apply to row middles using a hooded or shielded sprayer or a wiper applicator. To avoid injury keep herbicide off foliage, shoots, stems, exposed roots and fruit. Do not apply within 14 days of harvest.
<b>POSTHARVEST:</b>			
metribuzin @ 1-2 lbs/A	Sencor 4 FL@ 2-4 pt/A Sencor 75DF, Metribuzin 75 DF @ 1.33-2.67 lb/A	Annual broadleaf weeds and grasses	After last harvest of season. Do not use first growing season after setting crowns.
paraquat @ 0.63-1.0 lbs/A	Gramoxone Inteon @ 2.5-4 pts/A Firestorm @ 1.7-2.7 pts/A Parazone @ 1.7-2.7 pts/A	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennial weeds.	Apply in a minimum of 20 gallons water/A to control emerged weeds. Use on asparagus at least 2 years old. Mix with NIS @ 1-2 pts/100 gal
halosulfuron @ 0.024-0.072 oz/A	Sandea 75 DF @ 0.5-1.5 oz./A	Yellow and purple nutsedge. Several broadleaf weeds.	Apply after harvest with drop nozzles. Contact with ferns may result in temporary yellowing. Do not use an adjuvant. Don't exceed 2 oz/A/year.

## VEGETABLE WEED MANAGEMENT

### ASPARAGUS

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTHARVEST: continued</b>			
diuron @ 0.75-3.0 lbs/A	Direx 4 L, Diuron 4L @ 1.5-3 pt/A on light soil 3-6 pt/A on clay soil  Direx 80DF, Diuron 80WP, Karmex 80DF @ 1-2 lb/A on light soil 2-4 lb/A clay	Annual broadleaf and grass weeds	Early spear emergence; second application immediately following harvest. Do not apply to young plants during first growing season or on plants with exposed roots. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

### SNAP & LIMA BEANS<sup>3,4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
s-metolachlor @ 0.95-1.9 lb/A	Dual Magnum, Dual II Magnum @ 1-1.3 pts/A on coarse soil 1.3-1.67 pts/A on med.-fine soil	Many small seeded grasses, yellow nutsedge and pigweed.	Incorporate in top 2" of soil. Check label for tank-mixes with other herbicides. Consult label for rates on soils with more than 3% OM.
metolachlor @ 0.98-1.63 lbs/A	Medal, Stalwart, Parallel, Charger @ 1.0-1.3 pts/A on coarse soil @ 1.3-1.67 pts/A on med.-fine soil	Many small seeded grasses, yellow nutsedge and pigweed.	Incorporate in top 2" of soil. Check label for tank-mixes with other herbicides. Higher rates can be used on soils with greater than 3% organic matter; consult label.
pendimethalin <sup>2</sup> @ 0.5-1.5 lbs/A	Prowl 3.3, Pendimax 3.3 @ 1.2-1.8 pts/A on light soil 1.8-2.4 pts/A on med. soil 1.8-3.6 pts/A on heavy soil Prowl H2O @ 1-1.6 pts/A on light soil 1.6-2.1 pts/A on med. soil 2.1-3.2 pts/A on heavy soil	Many small seeded grasses and broadleaves, including annual spurge, reduction from competition from smartweed & velvetleaf	If replanting is necessary, do not work soil deeper than the treated zone. Do not apply after planting (surface treatment) or serious injury can result. Check label for tank-mixes with other herbicides.
imazethapyr @ 0.023 lb/A on snap bean; 0.047 lb/A on lima bean	Pursuit 2 EC @ 1.5 oz/A snap bean 3 oz/A lima bean Pursuit DG @ 1.08 oz/A lima bean	Several broadleaf weeds including morningglory, pigweed, smart weed and purslane	May be tank-mixed with a grass herbicide. Check label for plant-back restrictions.
trifluralin <sup>2</sup> @ 0.5-.75 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1pt/A on light soil 1.5 pts/A on med.-heavy soil 60 DF products @ 0.8 lb/A on light soil 1.33 lbs/A on med.-heavy soil	Small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Incorporate thoroughly in top 2" of soil just before planting. Check label for tank-mixes with other herbicides.
alachlor <sup>2</sup> @ 1.5-3 lbs/A	Lasso, Micro Tech @ 1.5-2 qt/A on light soil 2.5-3 qt/A on med.-heavy soil Partner WDG @ 3.8-4.2 lbs/A on light soil 4.2-4.5 lb/A on med-heavy soil	Small seeded annuals	<b>Apply to lima beans only.</b> May delay maturity and/or reduce yields if cold, wet soil conditions occur after planting. Check label for tank-mix options.
<b>PREEMERGENCE:</b>			
s-metolachlor @ 0.95-1.9 lb/A	Dual Magnum, Dual II Magnum @ 1-1.3 pts/A on coarse soil 1.3-1.67 pts/A on med.-fine soil	Many small seeded grasses, yellow nutsedge and pigweed.  Most effective on nutsedge when incorporated.	Check label for tank-mixes with other herbicides. Higher rates can be used on soils with greater than 3% organic matter; consult label.

## VEGETABLE WEED MANAGEMENT

### SNAP & LIMA BEANS<sup>3,4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE: continued</b>			
metolachlor @ 0.98-1.63 lbs/A	Medal, Stalwart, Parallel, Charger @ 1.0-1.3 pts/A on coarse soil @ 1.3-1.67 pts/A on med.-fine soil	Many small seeded grasses, yellow nutsedge and pigweed. Most effective on nutsedge when incorporated.	Check label for tank-mixes with other herbicides. Higher rates can be used on soils with greater than 3% organic matter; consult label.
imazethapyr @ 0.023 lb/A	Pursuit 2 EC @ 1.5 oz/A	Several broadleaf weeds including morningglory, pigweed, smart weed and purslane	<b>Apply to snap beans only.</b> May be tank-mixed with a grass herbicide. Check label for plant-back restrictions.
halosulfuron-methyl @ 0.024-0.036 lb/A	Sandea 75 DG @ 0.5- 0.7 oz/A	Nutsedge and other broadleaf weeds.	Apply following planting; prior to cracking. Will provide residual weed control.
fomesafen @ 0.188 lbs/a	Reflex 2 EC @ 1.5 pts/acre	many broadleaf weeds	<b>Snap beans only.</b> Apply preplant surface and preemergence. Check label for tank mixers. Total use cannot exceed 1.5 pt per acre. Check label for instructions and precautions
<b>POSTEMERGENCE:</b>			
quizalofop @ 0.04–0.08 lbs/A	Assure II @ 6-12 oz/A Targa @ 6-12 oz/A  Mix with COC @ 1gal/100 gal or with NIS @ 1qt/100 gal  Pump up sprayer: 1 tbsp herbicide + 2.5 tbsp COC or 2 tsp NIS	Annual and perennial grasses	Surfactant required; consult label for recommendations. Do not apply within 15 days of harvest. Maximum use rates are 14 oz/acre/season. Check label for rates on specific weeds and weed sizes.
bentazon @ 0.5-1 lb/A	Basagran @ 1-2 pt/A	Common purslane, velvetleaf, common ragweed, mustard, wild sunflowers, smartweed, hairy nightshade, cocklebur, giant ragweed, prickly sida, yellow nutsedge & other broadleaf weeds.	Apply when weeds are small and actively growing after beans form two fully expanded trifoliolate leaves. Do not apply to beans that have been subjected to stress (hail, flooding, drought, injury from other herbicides or widely fluctuating temperatures). Rates are highly dependent on size and age of weeds. Check label for more specific rates. Do not apply within 30 days of harvest. Two applications 7 to 10 days apart may be required to control yellow nutsedge.
halosulfuron-methyl @ 0.024 to 0.036 lb/A	Sandea 75 DG @ 0.5 to 0.7 oz/A	No grass control. Nutsedge and other broadleaf weeds.	Apply after the 2 to 3 trifoliolate stage prior to flowering. May cause temporary stunting, which could delay maturity.
sethoxydim @ 0.1-0.47 lbs/A	Poast @ 0.75-2.5 pts/A  Mix with COC @ 2 pts/A  Pump up sprayer: 1/3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses	Apply to actively grasses before they exceed labeled heights; consult label. Do not apply within 15 days of harvest. Adjust pressure (40-60 psi), spray volume (5-20 gal/A) and boom height to ensure thorough coverage. Do not apply more than 4 pts/A/year. Use caution when temperatures and relative humidity are high.

## VEGETABLE WEED MANAGEMENT

### SNAP & LIMA BEANS<sup>3,4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
halosulfuron-methyl @ 0.024 to 0.036 lb/A	Sandea 75 DG @ 0.5 to 0.7 oz/A	Nutsedge and other broadleaf weeds.	Apply after the 2 to 3 trifoliolate stage prior to flowering. May cause temporary stunting, which could delay maturity.
fomesafen @ 0.125-0.375 pt/A	Reflex 2 EC @ 0.5-1.5 pt/A  Mix with NIS @ 1 qt/100 gal	Many broadleaf weeds.	<b>Apply to snap beans only.</b> Snap beans should have at least 1 expanded trifoliolate leaf. Total use cannot exceed 1.5 pt /acre. Do not apply within 30 days of harvest. See label for further instructions and tank-mixes.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim 2EC @ .75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A  Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds.  No grass control.	Apply using hoods or shields. Crops contacted will be injured. Most effective on weeds less than 4 inches tall. Can be tank mixed with other herbicides.
glyphosate @ 0.5-1.4 lbs/A	Roundup Weathermax @ 11-32 oz/A  Various 4 L brands @ 16-45 oz/A Various 5 L brands @ 11-32 oz/A	Most emerged weeds	Apply to row middles using a hooded or shielded sprayer or a wiper applicator. To avoid injury keep herbicide off foliage, shoots, stems, exposed roots and fruit.

## VEGETABLE WEED MANAGEMENT

BEETS<sup>3,4,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
cycloate <sup>2</sup> @ 3-4 lb/A	Ro-Neet 6-E @ 4.0 pt/A on light soil 4.7 pt/A on medium soil 5.3 pt/A on heavy soil	Many small-seeded annual grasses & broadleaf weeds	Incorporate thoroughly in top 2" of soil 5 to 7 days before planting.
<b>PREEMERGENCE:</b>			
pyrazon @ 3.2-3.7 lb/A	Pyramin DF @ 4.6 lb/A on light-med. soil 5.4 lb/A on heavy soil	Many small-seeded annual grasses & broadleaf weeds	Apply after planting before weeds emerge. If rainfall does not occur within 5-10 days after treatment, beets should be irrigated or shallowly cultivated.
cycloate @ 3-4 lb/A	Ro-Neet 6-E @ 4.0 pt/A on light soil 4.7 pt/A on medium soil 5.3 pt/A on heavy soil	Many small-seeded annual grasses & broadleaf weeds	Apply at planting. Incorporate thoroughly in top 2" of soil 5 to 7 days before planting to reduce risk of temporary crop injury.
<b>POSTEMERGENCE:</b>			
pyrazon @ 3.2-3.7 lb/A	Pyramin DF @ 4.6 lb/A on light-med. soil 5.4 lb/A on heavy soil	Many small-seeded annual grasses & broadleaf weeds	Apply after beets have 2 expanded true leaves and before any weeds have more than 2 to 4 true leaves.
sethoxydim @ 0.2-0.3 lb/A	Poast @ 1-1.5 pts/A  Mix with COC @ 2 pts/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses.	Apply to small actively growing grasses. Consult label for application timing. Do not apply within 60 days of harvest. Do not apply Poast on days that are unusually hot and humid. Adding COC to Poast may increase injury.
phenmedipham @ 0.5-1.0 lb/A	Spin-Aid @ 3-6 pts/A	Several broadleaf weeds	Apply when beets are past the 4 to 6 leaf stage and weeds are at the 2-leaf stage. Do not apply within 60 days of harvest.
clopyralid @ 0.187 lb/A	Stinger 3 EC @ 0.5 pt/A	Broadleaf weeds; controls most legumes	Apply to small actively growing weeds. 30 days before harvest.
clethodim @ 0.094-0.125 lb/A	Select @ 6-8 oz/A  Mix with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses and annual bluegrass	Apply to actively growing grasses. Do not apply more than 8 oz/A in a single application. Do not apply to stressed weeds or when rainfall is expected within 1 hour. Wait at least 14 days before repeating applications.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40 DF @ 0.33-1.0 oz/A  Mix with COC @ 1.3 oz/gal or NIS @ 0.33 oz/gal	Most emerged broadleaf weeds  No grass control	Apply using hoods or shields. Will injure contacted crops. Most effective on small weeds. Can be mixed with other herbicides.

**VEGETABLE WEED MANAGEMENT****BEETS<sup>3,4,7</sup>**

<b>Active Ingredient and Rate</b>	<b>Formulated Product and Rate</b>	<b>Weeds Controlled</b>	<b>Remarks and Precautions</b>
<b>DIRECT POSTEMERGENCE: continued</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	To avoid severe crop injury, do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Apply to row middles only with a hooded sprayer, shielded sprayer, or a wiper applicator. Do not apply within 14 days of harvest.
<b>POST HARVEST:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply after harvest is complete.

## VEGETABLE WEED MANAGEMENT

### CABBAGE, CAULIFLOWER, BROCCOLI & BRUSSELS SPROUTS<sup>3,4,5,6</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
trifluralin <sup>2</sup> @ 0.5-1.0 lb/A for transplants 0.5-0.75 lb/A for direct seeded	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 0.75 or 1 pt/A on light soil 1.0 or 1.5 pt/A on med-heavy soil  60 DF products @ 0.6 or 0.8 lb/A on light soil 0.8 or 1.33 lb/A on med-heavy soil  Use the lower rate on direct seeded crops and the higher rate on transplants.	Small-seeded grasses, broadleaf weeds	Incorporate thoroughly in top 2" of soil just before transplanting or direct seeding. Direct seeded crops exhibit marginal tolerance to trifluralin at rates higher than 0.5 lb ai/A (1 pt/A). Stunting or reduced stands may occur. Do not exceed the 2 pt/A rate.
<b>PREPLANT:</b>			
oxyfluorfen @ 0.25-0.5 lb/A	Goal 1.6E or 2XL, Galligan @ 1.0 pt/A on coarse soil 2.0 pts/A on med to fine soil	Pennsylvania smartweed, pigweed, purslane & some grasses	<b>Transplants only.</b> Apply in at least 20 GPA. Do not exceed 40 psi pressure. Plant with minimal soil disturbance. May cause some leaf cupping.
DCPA @ 4.5-10.5 lbs/A	Dacthal 75WP @ 6-8 lb/A on light soil 8-10 lb/A on med soil 10-14 lb/A on heavy soil	Annual grasses and certain broadleaf weeds	<b>On direct seeded crops</b> apply just before planting in at least 20 gal water/A. A minimum of 1/3-1/2" of water is necessary to activate within 3- 5 days of application. If irrigation is unavailable, incorporate 1 to 2 inches to aid in weed control.
<b>POSTEMERGENCE:</b>			
sethoxydim @ 0.09-0.28 lb/A	Poast @ 0.5-1.5 pts/A  Mix with COC @ 2 pts/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses	<b>Do not use on Brussels sprouts.</b> Apply to small actively growing grasses; see label. Do not apply within 30 days of harvest. Adjust pressure (40-60 psi), spray volume (5-20 GPA), and boom height to ensure thorough coverage. Do not apply more than 3 pts/A/year. Rainfast in 1 hour.
clethodim @ 0.1-0.125 lb/A	Select @ 6-8 oz/A  Mix with COC at 1 gal/100gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	<b>Suggested for direct-seeded crops. Do not use on Brussels sprouts.</b> Apply to actively growing grasses. For repeat applications, make on a minimum of 14-day intervals. Rainfast in 1 hour. Do not apply within 30 days of harvest. Do not apply more than 8 oz/A in a single application.
clopyralid @ 0.9-0.187 lbs/A	Stinger 3 EC @ 0.25-0.5 pt/A	Broadleaf weeds, including clover	<b>Suggested for direct-seeded crops. Do not use on Brussels sprouts.</b> Apply when weeds are small and actively growing. Do not apply within 30 days of harvest.

## VEGETABLE WEED MANAGEMENT

### CABBAGE, CAULIFLOWER, BROCCOLI & BRUSSELS SPROUTS<sup>3,4,5,6</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	<b>Suggested for direct-seeded crops. Do not use on Brussels sprouts.</b> To avoid severe crop injury, do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Apply to row middles only with a hooded sprayer, shielded sprayer, or a wiper applicator. Do not apply within 14 days of harvest.
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40 DF @ 0.33-1.0 oz/A  Mix with COC @ 1.3 oz/gal or NIS @ 0.33 oz/gal	Most emerged broadleaf weeds  No grass control	<b>Do not use on Brussels sprouts.</b> Apply using hoods or shields. Will injure contacted crops. Most effective on small weeds. Can be mixed with other herbicides.

## VEGETABLE WEED MANAGEMENT

### CARROTS<sup>3,4,5</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
trifluralin <sup>2</sup> @ 0.5-1lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A heavy soil 60 DF products @ 0.875 lb/A on light soil 1.33 lb/A on medium soil 1.6 lb/A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass	Incorporate thoroughly in top 2" of soil just before planting.
<b>PREEMERGENCE:</b>			
linuron @ 0.5-1.5 lb/A	Lorox DF @ 1.5 lb/A on light soil 2-2.5 lb/A on medium soil 3.0 lb/A on heavy soil	Broadleaf weeds, some grasses and yellow nutsedge	Apply after planting before carrots or weeds emerge. Plant seed 1/2 inch deep. Be aware of replant restrictions.
<b>POSTEMERGENCE:</b>			
linuron @ 0.5-1.5 lb/A	Lorox DF @ 1.5 lb/A on light soil 2-2.5 lb/A on medium soil 3.0 lb/A on heavy soil	Broadleaf weeds, some grasses and yellow nutsedge	Apply after carrots are at least 3" tall and before grasses are 2" and broadleaves are 6". Do not tank-mix with other pesticides. Be aware of replant restrictions.
fluazifop @ 0.1-0.375 lb/A	Fusilade DX @ 0.375-1.5 pt/A  Mix 6-12 oz of Fusilade with 1-2 pts COC or 0.5-1 pt NIS in 25 gal of water.	Annual and perennial grasses	Apply to actively growing grasses before they exceed the labeled growth stages. Use sufficient spray volume (5-40 gals/A) and pressure (40-60 psi) to ensure adequate coverage. Do not harvest carrots within 45 days after application. Maximum use rate is 48 oz/A/season. Do not apply to stressed grasses or when rainfall is expected within 1 hour.
sethoxydim @ 0.09-0.47 lb/A	Poast @ 0.5-2.5 pt/A  Mix with 2 pt/A COC  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual & perennial grasses	Apply before grasses exceed height labeled heights. Adjust pressure (40-60 psi), spray volume (5-20 gal/A) and boom height to aid in coverage. Do not apply within 30 days of harvest. Maximum use rate is 3 pt/A. Rainfast in 1 hour.
clethodim @ 0.1-0.125 lb/A	Select @ 6-8 oz/A  Mix with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses and annual bluegrass	Apply postemergence to actively growing grasses. Do not apply under stressed conditions or if rainfall is expected within 1 hour. Do not apply within 30 days of harvest. Do not apply more than 8 oz/A in a single application. For repeat applications, make on a minimum of 14 day interval.

## VEGETABLE WEED MANAGEMENT

### CARROTS<sup>3,4,5</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
metribuzin @ 0.25 lb/A	Sencor FL @ 0.5 pt/A Sencor DF @ 0.33 lb/A	Many broadleaf weeds	Apply after carrots reach the 5-6 leaf stage but before weeds are 1 inch high. Do not apply within 3 days after a period of cool, wet or cloudy weather or crop injury will occur. Second application can be made after an interval of at least 3 weeks. Days to harvest – 60. Check label for crop rotation.
Stoddard solvent	Varsol @ 40-60 gal/A	Many annual grasses & broadleaf weeds	Do not apply later than 6 weeks before harvest. Apply before weeds are 1" tall. Works best on warm sunny days.
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply to row middles only using a hooded sprayer, shielded sprayer, or a wiper applicator. May, also, be used after harvest. To avoid severe crop injury do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.
pendimethalin @ 1lb/A	Prowl H2O @ 2 pt/A	Annual grasses and broadleaf weeds	May be applied as a directed spray to the soil between rows after the last mechanical cultivation. DO NOT ALLOW THE SPRAY TO CONTACT THE CARROT PLANTS OR INJURY MAY OCCUR. Do not apply more than 2.0 pints per acre per season. 60 DTH. Do not feed forage or graze livestock in treated fields.

## VEGETABLE WEED MANAGEMENT

SWEET CORN<sup>3,4</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/ PREPLANT INCORPORATED:</b>			
atrazine @ 1-2.0 lb/A	4L formulations @ 2 pt/A on coarse soil 3 pt/A on medium soil 4 pt/A on fine soil Multiply the 4 L rate by 0.8 when using a 5 L atrazine. 80 DF formulations @ 1.25 lbs/A on coarse soil 1.90 lbs/A on medium soil 2.50 lbs/A on fine soil Multiply the 80 DF rate by 0.88 when using a 90 DF atrazine.	Many small seeded annual grasses & broadleaf weeds	Apply to surface of freshly moist cultivated soil. Do not plant treated areas with any crop except corn or grain sorghum until the following year. Do not apply more than 2.0 lb ai/A per application or 2.5 lb ai/year. Check label for tank-mixes with other herbicides. Do not mix, load or use within 50 ft of a well. Use a device to prevent back siphoning when mixing.
s-metolachlor @ 1.25-1.56 lb/A + atrazine @ 1.63-2.0 lb/A	Bicep II Magnum @ 2.1-2.6 qt/A	Most small seeded annual grasses and broadleaf weeds.	See comments for atrazine and s-metolachlor. Do not exceed more than 2.0 lb ai/A atrazine per application (2.6 qt/A Bicep II or 3 qt/A Bicep Lite). Bicep Lite at 3 qt/A would injure corn. The maximum use rate for atrazine is 2.5 lb ai/A/year. Use Bicep Lite if another atrazine application is expected.
s-metolachlor @ 1.25-1.83 lb/A + atrazine @ 1-1.5 lb/A	Bicep Lite II Magnum @ 1.5 to 2.2 qt/A		
alachlor @ 2-4 lb/A	Lasso 4EC or MT @ 4 pt/A on light soil 6 pt/A on medium soil 8 pt/A on heavy soil Partner WDG @ 3 lb/A on light soil 4 lb/A on medium soil 6 lb/A on heavy soil	Many small seeded annual grasses and broadleaf weeds	Apply to surface of freshly cultivated soil. Do not forage or harvest immature corn within 12 weeks after treatment. Check label for tank-mixes with other herbicides.
alachlor @ 1.56-2.81 lb/A + atrazine @ 0.94-1.69 lb/A	Bullet @ 2.5 qt/A on coarse soil 3.5 qt/A on medium soil 4.0-4.5 qt/A on fine soil	Many small-seeded annual grasses and broadleaf weeds	See comments for atrazine. Do not exceed more than 2.0 lb ai/A atrazine per application (5.33 qt/A of Bullet). The maximum use rate for atrazine is 2.5 lb ai/A/year. Do not exceed 6.4 qts of Bullet/A per year.
<b>PREEMERGENCE:</b>			
S-metolachlor @ 0.95 – 1.91	Dual Magnum, Dual II Magnum @ 1-2 pt/A	Most annual grasses and pigweed	Apply to soil surface immediately after planting. Consult labels for approved tank mixes.
metolachlor @ 0.98-1.63 lbs/A	Medal, Stalwart, Parallel, Charger @ 1.0-1.3 pts/A on coarse soil @ 1.3-1.67 pts/A on med.-fine soil	Most annual grasses and pigweed	Apply to soil surface immediately after planting. Consult labels for approved tank mixes.
dimethenamid @ 0.94 -1.5 lb/A	Outlook @ 8-12 oz/A on coarse-med. soil 12-16 oz/A on fine soil	Most annual grasses, pigweeds, and some sedges	Apply to soil surface immediately after planting. Check with seed supplier for varietal tolerance. Consult label for approved tank-mixes.

## VEGETABLE WEED MANAGEMENT

### SWEET CORN<sup>3,4</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE: continued</b>			
atrazine @ 1-2.0 lb/A	Same as above.	Same as above.	Apply after planting before crop and weeds emerge. See additional comments above.
s-metolachlor @ 1.25-1.56 lb/A + atrazine @ 1.63-2.0 lb/A	Bicep II Magnum @ 2.1-2.6 qt/A	Most small seeded annual grasses and broadleaf weeds.	See comments for atrazine and s-metolachlor. Do not exceed more than 2.0 lb ai/A atrazine per application (2.6 qt/A Bicep II or 3 qt/A Bicep Lite). The s-metolachlor rate in 3 qt/A Bicep Lite would injure corn. The maximum use rate for atrazine is 2.5 lb ai/A/year. Use Bicep Lite if another atrazine application is expected.
s-metolachlor @ 1.25-1.83 lb/A + atrazine @ 1-1.5 lb/A	Bicep Lite II Magnum @ 1.5-2.2 qt/A		
alachlor @ 2-4 lb/A	Lasso 4EC or MT @ 4 pt/A on light soil 6 pt/A on medium soil 8 pt/A on heavy soil Partner WDG @ 3 lb/A on light soil 4 lb/A on medium soil 6 lb/A on heavy soil	Many small seeded annual grasses and broadleaf weeds	Apply after planting before weeds and corn emerge. Do not forage or harvest immature corn within 12 weeks after treatment. Check label for tank-mixes with other herbicides.
alachlor @ 1.56-2.81 lb/A + atrazine @ 0.94-1.69 lb/A	Bullet @ 2.5 qt/A on coarse soil 3.5 qt/A on medium soil 4.0-4.5 qt/A on fine soil	Many small-seeded annual grasses and broadleaf weeds	Apply after planting before weeds and corn emerge. See comments for atrazine and alachlor. Do not exceed 6.4 qt of Bullet/A per year.
<b>POSTEMERGENCE:</b>			
dimethenamid @ 0.94 -1.5 lb/A	Outlook @ 8-12 oz/A on coarse-med. soil 12-16 oz/A on fine soil	Most annual grasses, pigweeds, and some sedges	Apply early postemergence before corn reaches 8" tall and weeds exceed the 2 leaf stage. Check with seed supplier for varietal tolerance. Consult label for approved tank-mixes.
atrazine @ 1-2.0 lb/A	Rates as above.  Apply with 1 pt/25 gal NIS or 1 qt/25 gal COC	Many small seeded annual grasses & broadleaf weeds	Apply before corn is 12" tall and pigweeds reach 6" and before other broadleaf weeds reach 4" and grasses reach 1.5". Do not apply when crop is under stress from prolonged wet or cold weather, poor fertility, is wet and succulent following a recent rain, or other factors. See additional comments above.
s-metolachlor @ 0.96-1.56 lb/A + atrazine @ 1.25-2.0 lb/A	Bicep II Magnum @ 1.6-2.6 qt/A	Most small seeded annual grasses and broadleaf weeds.	Apply before weeds exceed the 2 leaf stage and corn exceeds 5". See comments for atrazine and s-metolachlor. Do not exceed more than 2.0 lb ai/A atrazine per application (2.6 qt/A Bicep II or 3 qt/A Bicep Lite). The s-metolachlor rate in 3 qt/A Bicep Lite would injure corn. The maximum use rate for atrazine is 2.5 lb ai/A/year. Use Bicep Lite if another atrazine application is expected.
s-metolachlor @ .91-1.58 lb/A + atrazine @ 0.73-1.26 lb/A	Bicep Lite II Magnum @ 1.1-1.9 qt/A		

## VEGETABLE WEED MANAGEMENT

### SWEET CORN<sup>3,4</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
bentazon @ 0.75-1.0 lb/A	Basagran @ 1.5-2 pts/A  Mix with COC in some situations; consult label.	Many broadleaf weeds including annual morningglory, cocklebur, velvetleaf, Pennsylvania smartweed, prickly sida, dayflower and ragweed  No grass control	Apply to small, actively growing weeds. Two applications of 5-14 days apart may be necessary to control morningglories at the 4th leaf and 4" tall stage. Addition of COC will increase control of morningglory, velvetleaf and ragweed. Check label for tank-mixes with other herbicides. Do not apply more than 4 pt/A per season.
halosulfuron @ 0.032 lb/A	Sempra, Sandea @ 0.66 oz/A  Apply with NIS @ 1-2 pt/100 gal. of water or COC @ 1 gal/100 gal. of water	Nutsedge and some broadleaf weeds	User assumes all responsibility for use on sweet corn. May be applied over the top or with drop nozzles from spiking to layby. A sequential treatment of 0.66 oz/A directed to avoid application in the whorl may be made. Avoid cultivation for 7 days after application. Consult label for plantback restrictions. No more than 2 applications per season. Do not apply to crops under stress. Check label for weed stage development. Do not harvest within 30 days of application.

## VEGETABLE WEED MANAGEMENT

### CUCURBITS (cucumber, squash, watermelon, pumpkin, cantaloupe)<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE:</b>			
ethalfluralin @ 1.13-1.7 lb/A	Curbit EC @ 3 pt/A on coarse soil 3-4 pt/A on medium soil 4-4.5 pt/A on fine soil	Certain annual grasses and broadleaf weeds.  Replant only crops listed on the Curbit or other ethalfluralin labels.	Apply after planting before crop and weeds emerge. Band between rows after transplanting or seeded crop emerge. Do not use under or over row covers, hot caps, plastic mulch or other plant covers. Under cool weather that can delay early seedling emergence or growth (first planting of the season), Curbit can cause injury or crop failure. Crop residue, weeds, cloddy conditions, and wet soils may interfere with Curbit performance. Must be activated with 5 day with a 1/2" of rainfall or irrigation.
halosulfuron @ 0.024 - 0.36 lb/A	Sandea @ 1/2-3/4 oz/A	Nutsedge and some broadleaf weeds	<b>Cucumbers and cantaloupe only.</b> Apply after planting before weeds and crop emerge. Can also be applied 7 days prior to transplanting. May be applied as an under plastic mulch. Apply following final bed shaping and just prior to laying plastic. Wait 7 days after application to plant.
ethalfluralin @ 0.4-1.2 lb/A + clomazone @ 0.125 – 0.325 lb/A	Strategy 2.1L @ 2.6 pt/A	Annual grasses and broadleaf weeds	Apply after seeding. <b>Do not apply prior to planting. Do not incorporate.</b> Can use in row middles.
clomazone @ 0.15 – 0.375 lb/A	Command 3ME @ 0.40 – 1.00 pt/A	Annual grasses and broadleaf weeds with some cocklebur control.	Apply to after planting. Foliar contact with drift or vapors may whiten plants. Symptoms are generally temporary, but may persist on some plants. Don't apply within 1,200 feet of sensitive areas; consult label. Rotation to all is 12 months. May be mixed with other herbicides. Some varieties may be sensitive; consult label. <b>Don't use on Jack-O-Lantern or squash.</b>
terbacil @ 0.1-0.2 lb/A	Sinbar 80 WP @ 2-4 oz/A	Broadleaf weeds	<b>For use on watermelons only.</b> Apply before crop or weeds emerge or apply before transplanting. Can be applied under plastic or to row middles. Can be applied over plastic mulch before punching holes. However, a 1/2 inch rain is required to wash off Sinbar before holes are punched or transplanted.
<b>POSTEMERGENCE:</b>			
clethodim @ 0.1 - 0.125 lb/A	Select Max @ 9-16 oz/A Arrow @ 6-8 oz/A  Apply with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal clethodim + 1.3 oz/gal COC	Annual and perennial grasses	May also be applied to <b>musk melons</b> . Apply before grasses exceed recommend height; consult label. Do not apply under stressed conditions. Rain-fast in 1 hour. Don't harvest within 30 d. Don't apply more than 8 oz/A/application. Allow 14 d between applications.

## VEGETABLE WEED MANAGEMENT

### CUCURBITS (cucumber, squash, watermelon, pumpkin, cantaloupe)<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
halosulfuron @ 0.024 - 0.36 lb/A	Sandea @ 1/2 -3/4 oz/A  Apply with NIS @ 1 qt/ 100 gal of water	Yellow and purple nutsedge and some broadleaf weeds.	<b>Cucumbers and cantaloupe only.</b> Overtop application 14 days after transplanting. Avoid overtop application when temperature or humidity is high. Can be applied as a direct spray to row middles. 30 days to harvest cucumbers. 57 days to harvest cantaloupes. Long residual; see label for planting intervals DO NOT apply more than 2 oz/acre in a 12 month period.
sethoxydim @ 0.09-0.28 lbs/A	Poast @ 0.5-1.5 pt/A  Apply with COC @ 2 pt/A  Pump up sprayer: 1.3-2 oz/gal Poast+ 1.3 oz/A COC/gal	Annual and perennial grasses	May also be applied to <b>musk melons</b> . Apply before grasses exceed recommend height; consult label. Adjust pressure (40-60 psi), spray volume (5-20 gal/A) and height of spray boom to ensure thorough coverage. Do not apply Poast within 14 days of harvest. Do not apply more than 3 pt/A/season. Poast plus COC should be used with caution when temperatures exceed 90° F and the relative humidity is 60% or higher because of potential leaf injury. Rainfast in 1 hour. Do not apply to grasses under stress.
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply to row middles only using a hooded sprayer, shielded sprayer, or a wiper applicator. May, also, be used after harvest. To avoid severe crop injury do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.
halosulfuron @ 0.12- 0.18 lb/A	Sandea 75 DF @ ½ - 1 oz/A	Nutsedge and some broadleaf weeds	Apply to row middles. <b>For use in watermelons, pumpkins or squash only.</b>
trifluralin <sup>2</sup> @ 0.5-1lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A heavy soil 60 DF products @ 0.875 lb/A on light soil 1.33 lb/A on medium soil 1.6 lb/A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass	<b>For use only on cucumbers, watermelons and cantaloupes.</b> Direct spray to row middles and/or beneath plants at the 3-4 true leaf stage. Incorporate within 24 hrs; adjust equipment to move treated soil around the base of plants. Do not harvest cucumbers or cantaloupes within 30 days or water-melons within 60 days. <b>Do not apply over the top of plants.</b>
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40DF @ @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC at 1 gal/100 gal	Most emerged broadleaf weeds  No grass control	<b>Do not use on squash.</b> Apply postemergence directed using hoods. Spray will injure crop. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control. Can be mixed with other herbicides to control grasses.

**VEGETABLE WEED MANAGEMENT****CUCURBITS (cucumber, squash, watermelon, pumpkin, cantaloupe)<sup>4,5,6,7</sup>**

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE: continued</b>			
ethalfluralin @ 0.4-1.2 lb/A	Strategy @ 2.1 L 2-3 pt/A	annual grasses and broadleaf weeds	Cucumbers, cantaloupes pumpkins watermelons and squash. May be applied post directed spray to row middles after crop emergence or transplanting. Do not apply over plants.
clomazone @ 0.125-0.325lb/A			

## VEGETABLE WEED MANAGEMENT

EGGPLANT<sup>4,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PRE-TRANSPLANT:</b>			
napropamide @ 1-2 lb/A	Devrinol 50DF @ 2 lb/A on light soil 3 lb/A on medium soil 4 lb/A on heavy soil	Certain annual grasses and broadleaves	<b>Apply before transplanting; can only be used on trans-plants.</b> Incorporate 1-2" deep soon after application. Spray soil strip between rows of plastic after laying the mulch.
trifluralin <sup>2</sup> @ 0.5-1lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A heavy soil  60 DF products @ 0.875 lb/A on light soil 1.33 lb/A on medium soil 1.6 lb/A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass	Incorporate thoroughly in the top 2" of soil just before transplanting. Avoid trans-planting until temperatures have warmed in the spring. Eggplant tolerance may be marginal. Use with caution.
<b>POSTEMERGENCE/POST TRANSPLANT:</b>			
sethoxydim @ 0.188-0.28 lbs/A	Poast @ 0.5-1.5 pts/A  Apply with COC @ 2 pts/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses before they exceed labeled heights; consult label. Adjust equipment to ensure good coverage. 20 days before harvest. Max use rate is 4.5 pt/A/yr. Rainfast in 1 hr. Poast plus COC may cause leaf burn.
clethodim @ 0.1 - 0.125 lb/A	Select @ 6-8 oz/A  Apply with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses before they exceed labeled heights; consult label. 20 days before harvest. Max use rate is 8 oz/A/application. Rainfast in 1 h. Allow 14-days between applications.
<b>DIRECTED POSTEMERGENCE/DIRECTED POST TRANSPLANT:</b>			
paraquat @ 0.49 lb/A	Gramoxone Inteon @ 2 pt/A Firestorm, Parazone @ 1.7-2.7 pt/A  Mix with NIS @ 1 pt/100 gal or COC @ 1 gal/100 gal  Pump up sprayer: 0.33 oz/gal paraquat + 0.33-0.5 oz/gal NIS or 1.3 oz/gal COC.	Emerged small annual broadleaf weeds & grasses. Top kill and suppression of perennials.	Apply after transplanting as a directed spray between rows. Use shields to protect crop. Use 20-100 gal of water/A. Don't exceed 30 psi nozzle pressure or spray under conditions that favor drift. Apply when weeds & grasses are 1-6" high. 30 days to harvest. Don't make more than 3 applications/season. Don't feed or graze treated areas.

## VEGETABLE WEED MANAGEMENT

### EGGPLANT<sup>4,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE/DIRECTED POST TRANSPLANT: continued</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A	Most emerged weeds	Apply to row middles only using a hooded or shielded sprayer or a wiper applicator. May also be used post-harvest. To avoid severe injury to crop, do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.
	Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A		
halosulfuron @ 0.12 – 0.18 lb/A	Sandea @ ½ - 1 oz/A	Nutsedge and some broadleaf weeds	Apply to row middles; avoid contact with crop and plastic. Do not apply within 30 days of harvest. Long residual. Check label for re-crop intervals. Do not apply more than 2 oz/A/year.
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim 2 EC @ .75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A	Most emerged broadleaf weeds	Apply as directed spray using hoods. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control.
	Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	No grass control; can be mixed with grass herbicides	

## VEGETABLE WEED MANAGEMENT

### GREENS (collard, mustard and turnip)<sup>3,4,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
trifluralin <sup>2</sup> @ 0.5-.75 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med.-heavy soil 60 DF products @ 0.8 lb/A on light soil 1.33 lbs/A on med.-heavy soil	Small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Incorporate thoroughly in top 2" of soil just before planting.
<b>POSTEMERGENCE:</b>			
sethoxydim @ 0.09-0.28 lbs/A	Poast @ 0.5-1.5  Apply with COC @ 2 pts/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	<b>Do not use on turnips.</b> Apply to actively growing grasses before they exceed labeled heights; consult label. Adjust equipment to ensure good coverage. 20 days before harvest. Max use rate is 4.5 pt/A/yr. Rainfast in 1 hr. Poast plus COC may cause leaf burn. Use with caution when temperatures exceed 90°F and the relative humidity is 60% or higher, or when temperatures reach 100°F.
clethodim @ 0.1 - 0.125 lb/A	Select Max @ 9-16 oz/A Arrow @ 6-8 oz/A  Apply with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal clethodim+1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses before they exceed labeled heights; consult label. Do not apply within 14 days of harvesting leaves, or 30 days of harvesting the root. Max use rate is 8 oz/A/application. Rainfast in 1 h.
clopyrild @ 0.187 lb/a	Stinger 3 ED 0.3-0.5 pt/a	Clover, legumes and other broadleaf weeds	Apply to crop when weeds are small and actively growing. 30 DTH mustard, collards, turnips roots, kale. 15 DTH turnips tops. Mustard green injury has been observed in some trials.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim2 EC @ .75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct application using a hooded sprayer. Spray will injure crop. Most effective when weeds are less than 4" tall. Good coverage equals good control.
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	<b>Not labeled for turnip.</b> Apply to row middles only using a hooded or shielded sprayer or a wiper applicator. May also be used post-harvest. To avoid severe injury to crop, do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.

## VEGETABLE WEED MANAGEMENT

### GARLIC<sup>3,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE:</b>			
oxyfluorfen @ 0.25-0.5 lb/A	Goal 1.6E @ 1.25-2.5 pt/A Goal 2XL, Galligan 2 EC @ 1-2 pt/A	Annual broadleaf weeds	Apply a single application within 2 d of planting for preemergence control. See postemergence section for additional comments.
pendimethalin @ 0.5-1.5 lbs/A	Prowl 3.3, Pendimax 3.3 @ 1.2-1.8 pts/A on light soil 1.8-2.4 pts/A on med. soil 1.8-3.6 pts/A on heavy soil Prowl H2O @ 1-1.6 pts/A on light soil 1.6-2.1 pts/A on med. soil 2.1-3.2 pts/A on heavy soil Pentagon DG @ 0.5-1.25 lb/A on light soil 1.25-1.7 lb/A on med. soil 1.25-2.5 lb/A on heavy soil	Many small seeded grasses and broadleaves, including annual spurge	Apply after planting before weeds and crop emerge. Treatment most effective when rainfall or overhead irrigation is received within 7 days after application. May be applied as split application both preemergence and postemergence.
flumioxazin @ 0.188 lb/a	Chateau 51 WDG @ 6 oz/a	Annual grasses and broadleaf weeds	Application can be made within 3 days after planting. Apply prior to garlic and weed emergence. Do not apply more than 6 oz per growing season.
<b>POSTEMERGENCE:</b>			
bromoxynil @ 0.375-0.5	Buctril 2EC, Moxly 2EC @ 1.5-2 pt/A  Buctril 4EC @ 0.75-1 pt/A	Many broadleaf weeds	Apply when garlic has 1-2 true leaves and less than 12" tall and weeds are 1-4" tall. Use a minimum spray volume of 20 gals/A. Do not apply within 112 days to harvest. Do not add surfactants. Use lower rate on small weeds and the higher rate on 4" weeds. Do not apply more than 0.5 lb ai/A/season.
fluzifop @ 0.1-0.375 lb/A	Fusilade DX @ 0.375-1.5 pt/A  Apply with COC @ 1-2 pts/25 gal or NIS @ 0.5-1 pt/25 gal  Pump up sprayer: 0.75 oz/gal Fusilade + 1.5 oz/gal COC or 0.5 oz/gal NIS	Annual and perennial grasses	Apply to actively growing grasses before they exceed the labeled heights; consult label. Use sufficient spray volume (5-40 gals/A) and pressure (40-60 psi) to ensure complete coverage. Do not harvest garlic within 45 days after application. Do not apply a total of more than 48 oz. of Fusilade DX per acre per season. Do not apply to grasses which are stressed. Do not apply if rainfall is expected within 1h.
dimethenamid-P @ 0.60-1.0 lb/A	Outlook 6 EC @ 12 – 21 oz/A	Annual grasses and pigweed.	Apply after the crop has reached the 2 true leaf stage until a minimum of 30 DTH. Application made prior to 2 true leaf stage may result in significant crop injury including possible stand reduction.

## VEGETABLE WEED MANAGEMENT

GARLIC<sup>3,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
clethodim @ 0.1-0.125 lb/A	Select 2EC, Arrow @ 6-8 oz/A Select Max @ 9-16 oz/A  Apply with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal clethodim+1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses. Rates vary by grass species, stage and region. Do not apply under stressed conditions. Rainfast in 1 hr. Days to harvest = 45. Don't apply more than 0.5 lb ai/A/year. Apply in a minimum of 20 gals/A.
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pt/A  Apply with COC @ 2 pt/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses before they exceed labeled heights; consult label. Adjust equipment to ensure good coverage. 45 days before harvest. Max use rate is 3 pt/A/yr. Use with caution when temperatures exceed 90°F and the relative humidity is 60% or higher, or when temperatures reach 100°F.
oxyfluorfen @ 0.12 lb/A	Goal 1.6E @ 9.6 oz/A Goal 2XL, Galligan 2 EC @ 7.6 oz/A	Annual broadleaf weeds	Apply after garlic has 2 true leaves and weeds are in the 2 to 4 true leaf stage. Some garlic injury may result. Injury may be severe if applied under cool, wet conditions. Don't make more than 4 applications/year. Do not apply within 60 days of harvest.
pendimethalin @ 0.5-1.5 lbs/A	Prowl 3.3, Pendimax 3.3 @ 1.2-1.8 pts/A on light soil 1.8-2.4 pts/A on med. soil 1.8-3.6 pts/A on heavy soil Prowl H2O @ 1-1.6 pts/A on light soil 1.6-2.1 pts/A on med. soil 2.1-3.2 pts/A on heavy soil Pentagon DG @ 0.5-1.25 lb/A on light soil 1.25-1.7 lb/A on med. soil 1.25-2.5 lb/A on heavy soil	Many small seeded grasses and broadleaves, including annual spurge	Apply to garlic with 1-5 leaves. Treatment most effective when rainfall or overhead irrigation is received within 7 days after application. May be applied as split application both pre-emergence and postemergence. Garlic treated postemergence should not be harvested within 45 days after application.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 75-1.5 oz/A Aim 40 DF @ 0.33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control, but can be mixed with grass herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective on weeds less than 4" tall. Coverage is critical to weed control.
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax, other 5L brands @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A	Most emerged weeds	Apply to row middles only using a hooded or shielded sprayer or a wiper applicator. May also be used post-harvest. Avoid crop injury by keeping herbicide off foliage, green shoots, stems, exposed roots or fruit.

## VEGETABLE WEED MANAGEMENT

### LETTUCE, ENDIVE, ESCAROLE and RADICCHIO<sup>3,4,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
benefin @ 1.12-1.5 lb/A	Balan DF @ 2.0 lbs/A on coarse-med soil 2.5 lbs/A on fine soil	Annual grasses and broadleaf weeds	<b>Lettuce and endive:</b> Incorporate into the top 2-3" of the final seed bed before seeding or transplanting. Check label for further information.
pronamide @ 1-2 lbs/A	Kerb 50-WP @ 2.0-3.0 lbs/A on coarse-med soil 3.0-4.0 lbs/A on fine soil	Annual grasses and broadleaves.	<b>Lettuce, endive &amp; escarole:</b> Necessary to move herbicides into the root zone of germinating weeds by overhead sprinkler irrigation or rainfall 2-3 days after application. Can be incorporated shallowly and thoroughly before planting. Check rotation restrictions. Make only one application/year.
bensulide @ 5-6 lb/A	Prefar 4E @ 5-6 qt/A	Certain annual grasses and broadleaf weeds	<b>Lettuce:</b> Incorporate 1-2" before planting.
trifluralin <sup>2</sup> @ 0.5-.75 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med.-heavy soil  60 DF products @ 0.8 lb/A on light soil 1.33 lbs/A on med.-heavy soil	Small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	<b>Endive, escarole and radicchio:</b> Incorporate thoroughly in top 2" of soil just before planting. Cold, wet soil conditions just after planting may increase risk of crop injury. Do not seed until seedbed has warmed.
<b>PREEMERGENCE:</b>			
bensulide @ 5-6 lb/A	Prefar 4E @ 5-6 qt/A	Certain annual grasses and broadleaf weeds	<b>Lettuce:</b> Apply after planting to crops where the application can receive immediate irrigation.
pronamide @ 1-2 lbs/A	Kerb 50-WP @ 2.0-3.0 lbs/A on coarse-med soil 3.0-4.0 lbs/A on fine soil	Annual grasses and broadleaves.	<b>Lettuce, endive &amp; escarole:</b> See comments above
<b>POSTEMERGENCE:</b>			
clethodim @ 0.1 - 0.125 lb/A	Select 2 EC, Arrow @ 6 - 8 oz/A Select Max @ 9-16 oz/A  Apply with COC @ 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/A clethodim + 1.3 oz/gal COC	Annual and perennial grasses	<b>For use on leaf lettuce:</b> Apply to actively growing grasses. Do not apply more than 8 oz/A in a single application. Rainfast in 1 hour. Do not apply within 14 days of harvest. Allow 14 days between applications.
pronamide @ 1-2 lbs/A	Kerb 50-WP @ 2.0-3.0 lbs/A on coarse-med soil 3.0-4.0 lbs/A on fine soil	Annual grasses and broadleaves.	<b>Head lettuce, endive &amp; escarole: Don't apply to leaf lettuce POST.</b> Apply before or after thinning before weeds germinate. Move herbicide into the root zone by overhead irrigation or rainfall within 2-3 days. Check rotation restrictions. 55 days to harvest. Make one application/year.

## VEGETABLE WEED MANAGEMENT

### LETTUCE, ENDIVE, ESCAROLE and RADICCHIO<sup>3,4,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: conitnued</b>			
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pt/A  Apply with COC @ 2 pt/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	<b>Lettuce:</b> Apply to actively growing grasses before they exceed labeled heights; consult label. Don't apply within 30 days of head lettuce harvest or within 15 days of leaf lettuce. Adjust pressure (40-60 psi), spray volume (5-20 gal/A) and height of spray boom to ensure thorough coverage. Do not apply more than 4.5 pts/A/year. Rainfast in 1 hour. Poast plus COC should be used with caution because of potential of leaf injury when temperature and RH are high.
fluzafop @ 0.1-0.375 lb/A	Fusilade DX @ 6-8 oz/A  Apply with COC @ 1-2 pt/25 gal or NIS @ 0.5-1 pt/25 gal	Annual and perennial grasses	<b>Lettuce and endive:</b> Apply to actively growing grasses before they exceed labeled growth stages; consult label. Use sufficient spray volume (5-40 gal/A) and pressure to ensure complete coverage. Do not harvest lettuce within 28 days after application. Don't apply more than 48 oz/A/season.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 75-1.5 oz/A Aim 40 DF @ 0.33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control, but can be mixed with grass herbicides.	<b>Lettuce:</b> Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective on weeds less than 4" tall. Good coverage is critical.
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	<b>Lettuce:</b> Apply to row middles only using a hooded or shielded sprayer or a wiper applicator. May also be used post-harvest. Avoid injury by keeping herbicide off all plant parts. 14 days to har.

## VEGETABLE WEED MANAGEMENT

### IRISH POTATOES<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
s-metolachlor @ 0.96-1.9 lb/A	Dual Magnum, Dual II Magnum @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A on heavy soil	Many small-seeded grasses, yellow nutsedge, pigweed, carpetweed	Incorporate in top 3" before planting.; consult label. If cool wet weather occurs after application, Dual delays maturity and reduces yields in early maturing varieties. Do not follow this treatment with a pre-emerge application. Do not harvest within 60 after planting. Check label for tank-mixes with other herbicides. Planting & later cultural practices should not bring untreated soil to the surface.
metolachlor @ 0.96-1.9 lb/A	Medal, Stalwart, Parallel, Charger 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A on heavy soil	Many small-seeded grasses, yellow nutsedge, pigweed, carpetweed	Incorporate in top 3" before planting.; consult label. If cool wet weather occurs after application, Dual delays maturity and reduces yields in early maturing varieties. Do not follow this treatment with a pre-emerge application. Do not harvest within 60 after planting. Check label for tank-mixes with other herbicides. Planting & later cultural practices should not bring untreated soil to the surface.
<b>PREEMERGENCE:</b>			
dimethenamid-P	Outlook 6EC @ 12-21 Oz/A	Most annual grasses, broadleaf weeds, and yellow nutsedge.	Apply after planting or drag-off. Will not control emerged weeds.
rimsulfuron @ 0.016-0.023 lb/A	Matrix 25 DWG @ 1.0 -1½ oz/A	Most annual broadleaf weeds and some grasses.	Apply after drag-off or hilling but before potatoes and weeds emerge. If emerged weeds are present add 1-2 pts NIS /100 gals. See label for tank mixtures.
s-metolachlor @ 0.96-1.9 lb/A	Dual Magnum, Dual II Magnum @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A on heavy soil	Many small-seeded grasses, yellow nutsedge, pigweed, carpetweed	Apply after planting, drag-off or hilling before potatoes or weeds emerge; consult label. If cool wet weather occurs after application, Dual delays maturity and reduces yields in early maturing varieties. Do not use pre-emerge if Dual was used preplant. Do not harvest within 60 after planting. Check label for tank-mixes with other herbicides. Planting & later cultural practices should not bring untreated soil to the surface.
metribuzin @ 0.5-1 lb/A	Sencor 4L @ 1 pt/A on light soil 1.5 pt/A on medium soil 2 pt/A on heavy soil  Sencor DF @ 0.66 lb/A on light soil 1 lb/A on medium soil 1.3 lb/A on heavy soil	Crabgrass, foxtail, seedling johnsongrass, fall panicum, signalgrass and several broadleaf weeds	Do not plant treated areas to crops other than potatoes for one year after treatment. Do not apply to sweet potatoes or yams. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

### IRISH POTATOES<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE: continued</b>			
linuron @ 0.75-2.0 lb/A	Lorox DF @ 1-1.5 lbs/A on coarse soil 1.5-2 lbs/A on medium soil	Most small seeded annual grasses and broadleaf weeds	Apply before crop emergence. Apply before grasses are 2" tall and before broadleaf weeds are 6" tall. Plant seed at least 2" deep. Do not spray over top of emerged potatoes. If emerged weeds are present, add NIS @ 1pt/25 gal. Best results are obtained when application is made to moist soil, followed within 2 weeks by 1-2" of rainfall. Check label for tank-mixes with other herbicides.
pendimethalin @ 0.51.5 lbs/A	Prowl/Pendimax 3.3EC @ 1.2 pts/A on coarse soil 2.4 pts/A on medium soil 3.6 pts/A on fine soil Prowl H2O @ 1.0 pts/A on coarse soil 2.0 pts/A on medium soil 3.0 pts/A on fine soil Pentagon DG @ 0.85-1.25 lb/A on coarse soil 1.25-1.7 lb on medium soil 1.7-2.5 lb on fine soil	Most annual grasses, seedling johnsongrass and fair control of some broadleaves.	Apply after planting before crop or weeds emerge or after drag off. Most effective when rainfall is received within 7 d of application. Incorporate 1-2 inches deep if it does not rain within 7 days. Check label for tank mixes with other herbicides. Do not apply before planting. Do not apply to sweet potatoes.
flumioxazin @ 0.047 lb/A	Chateau 51 WD @ 1.5 oz/A	Most annual broadleaf weeds and some grasses	Apply after hilling, before crop emerges. A minimum of 2 inches of soil must cover crop at the time of application. Check label for tank-mixes.
<b>POSTEMERGENCE:</b>			
clethodim @ 0.1 - 0.125 lb/A	Select @ 6 - 8 oz/A  Apply with COC at 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses. 30 days to harvest. Rainfast in 1 hour. Don't apply more than 8 oz/A/application. Allow 14 days between applications.
pendimethalin @ 0.75-1.5 lbs/A	Prowl/Pendimax 3.3EC @ 1.2 pts/A on coarse soil 2.4 pts/A on medium soil 3.6 pts/A on fine soil  Prowl H2O @ 1.0 pts/A on coarse soil 2.0 pts/A on medium soil 3.0 pts/A on fine soil	Most annual grasses, seedling johnsongrass and fair control of some broadleaves. Will not control emerged weeds	Apply after crop emergence to 6" stage of growth. This treatment is most effective when adequate rainfall is received within 7 days after application. Do not apply if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

IRISH POTATOES<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
sethoxydim @ 0.09-0.47 lbs/A	Poast @ 0.5-2.5 pt/A  Apply with COC @ 2 pts/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. Do not apply Poast within 30 days of harvest. Do not apply more than a total of 5 pts/A in one season. Do not apply if rainfall is expected within one hour following application. Do not apply to grasses under stress.
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply with a hooded sprayer in row middles, as shielded sprayer in row middles, as wiper applications in row middles or post harvest. To avoid severe injury to the crop do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit of crop. Do not apply with 14 days of harvest.
s-metolachlor @ 0.96-1.4 lb/A	Dual Magnum @ 1.67 pt/A	Many small-seeded grasses, yellow nutsedge, pigweed, carpetweed  No control of emerged weeds	Apply as a directed spray after hilling/layby to row middles. May be applied over a previous Dual Magnum application. Do not exceed 3.6 pts/A of Dual Magnum in a single crop season. Potatoes should not be harvested 40 days after a layby application. If cool wet weather occurs after application, Dual may delay maturity and reduce yields in early maturing varieties. See comments for s-metolachlor.
metolachlor @ 0.96-1.4 lb/A	Medal, Stalwart, Parallel, Charger @ 1.67 pt/A	Many small-seeded grasses, yellow nutsedge, pigweed, carpetweed  No control of emerged weeds	See comments for s-metolachlor.
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2EC @ 0.75-1.5 oz/A Aim 40DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC at 1 gal/100 gal	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Coverage is critical.
<b>HARVEST AIDE:</b>			
endothall @ 0.75-1.0 lb/A	Des-I-Cate @ 1.5-2 gal/A Desicate II @ 1.5-2 qt/A	Desiccate potato vines	Apply to vines 10-14 days prior to harvest. In addition to facilitating harvest, it assists in setting potato skins. Apply in 20-100 GPA. Use higher rates for heavy vine growth. Only mechanically harvest treated potatoes. Culling of harvested potatoes is allowed.
diquat dibromide @ 0.25-0.5 lb/A	Reglone Diquat @ 1-2 pt/A  Apply with NIS @ 1 pt/100 gal	Desiccate potato vines	Apply at least 7 days prior to harvest. Apply in 20-100 GPA/ Use higher volumes (40-100 gal) for heavy vine growth. Make a second application a minimum 5 days after first application where vine growth is dense. Do not exceed a total of 4 pt/A.

## VEGETABLE WEED MANAGEMENT

### OKRA<sup>3,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
trifluralin <sup>2</sup> @ 0.5-.1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med 2.0 pts/A on heavy soil 60 DF products @ 0.87 lb/A on light soil 1.33 lbs/A on medium soil 1.66 lbs/A on heavy soil	Small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Incorporate thoroughly in top 2" of soil just before planting. Check label for rates of other formulations of trifluralin.
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply with a hooded sprayer in row middles, as shielded sprayer in row middles, as wiper applications in row middles or post harvest. To avoid severe injury to the crop do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit of crop. Do not apply with 14 days of harvest.
carfentrazone-ethyl @ 0.012–0.024 lb/A	Aim 2EC @ 0.75-1.5 oz/A Aim 40DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC at 1 gal/100 gal	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Coverage is critical.

## VEGETABLE WEED MANAGEMENT

### ONION<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PRE-TRANSPLANT:</b>			
oxyfluorfen @ 0.25-0.5 lb/A	Goal 1.6E @ 1.25-2.5 pt/A Galligan 2 E @ 1.0-2.0 pt/A	Many annual broadleaf weeds	Apply after soil preparation, but prior to transplanting. Trans-planting should be completed with minimal soil disturbance. Do not exceed 2 pt/A as a result of multiple applications in one season. If less than 2 pt/A is applied as a pre- or post- transplant treatment, post-emergence applications can be made. <b>Do not apply to direct-seeded onions.</b>
<b>PREEMERGENCE/POST-TRANSPLANT:</b>			
oxyfluorfen @ 0.25-0.5 lb/A	Goal 1.6E @ 1.25-2.5 pt/A Galligan 2 E @ 1.0-2.0 pt/A	Many annual broadleaf weeds	<b>Transplant dry bulb only.</b> Onions are most tolerant to this application immediately following or within 2 days of transplanting. Do not disturb treated soil. Do not exceed 2 pt/A/year. If less than 2 pt/A is applied as a pre- or post-transplant treatment, POST applications can be made.
DCPA	Dacthal 75 WP @ 6-8 lb/A on light soil 8-10 lb/A on medium soil 10-14 lb/A on heavy soil	Annual grasses and certain broadleaf weeds	<b>Dry bulb onions direct seed or transplant.</b> Apply in at least 20 gal of water/A. A minimum of 1/3-1/2 inch of water is necessary to activate within 3-5 days of application. Do not incorporate.
<b>POSTEMERGENCE:</b>			
fluazifop @ 0.1-.375 lb/A	Fusilade DX @ 6-24 oz/A  Apply with COC @ 1-2 pt/25 gal or NIS @ 0.5-1 pt/25 gal  Pump up sprayer: 0.75 fl oz/gal Fusilade + 1.5 oz/gal COC	Annual and perennial grasses	<b>Dry bulb onions.</b> Apply to actively growing grasses before they exceed the recommended growth stages; consult label. 45 days to harvest. Use sufficient spray volume (5-40 gals/A) and pressure (40-60 psi) to ensure complete coverage. Do not apply more than 48 oz/A/season. Rainfast in 1 hour.
bromoxynil @ 0.25-0.375lb/A	Buctril, Moxy 2EC @ 1-1.5 pt/A Buctril 4EC @ 0.5 to .75 pt/A	Many broadleaf weeds	<b>Dry bulb onions.</b> Apply to onions with 2-5 true leaves. Water volume is important; use 50-70 gal/A. Soil and onion foliage should be dry at time of application, humidity should be low and dew should be dried. Do not treat if thrips damage or other damage has removed or reduced the waxy coating on the onion foliage. Even under ideal conditions some crop damage or death may occur.
dimethenamid-p @ 0.6 – 1.0 lb/A	Outlook 6 EC @ 12 – 24 oz/A	Most annual grasses and some broadleaf weeds	<b>Dry bulb onions.</b> Apply after onions have 2 true leaves. Do not apply within 30 days of harvest. If applications are made to transplant crop, DO NOT APPLY until transplants are in the ground and soil has settled around transplants with several days to recover.

## VEGETABLE WEED MANAGEMENT

ONION<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b> sulfuric acid	Battery Acid @ 3-5% solution of actual sulfuric acid	Emerged small broadleaf weeds and some grasses	<b>Dry bulb onions.</b> Apply after onions have reached the 2-4 leaf stage and weeds are in the 2-4 leaf stage. For best results apply on bright, sunny, and warm days. Apply in 40-60 gal of water for through coverage. <b>Pour acid into water, never water into acid.</b> Wear protective clothing and eyewear.
oxyfluorfen @ 0.12 lb/A	Goal 1.6E @ 0.6 pt/A Galligan 2E @ 0.5 pt/A	Many annual broadleaf weeds	Apply when onions have at least 2-3 fully developed true leaves and when weeds are in the 2-4 leaf stage or 2 weeks after transplanting. 45 days to harvest. Don't apply to onions under stress. Multiple treatments may be applied. Maximum use rate is 2 pt/A/yr. Apply in a minimum of 40 gals of water/A with flat fan tips at 20 to 40 psi. Avoid windy days For dry bulb onions avoid application during extended periods of cloudy, humid weather when soil moisture is plentiful.
clethodim @ 0.1 - 0.125 lb/A	Select, Arrow @ 6 - 8 oz/A Select Max @ 9-16 oz/A  Apply with COC at 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses and bluegrass	<b>Dry bulb onions.</b> Apply to actively growing grasses. Rates vary grass species, stage and region; consult label. Rainfast in 1 hour. Days to harvest = 45. Maximum use rate is 0.5 lb ai/A/year. 20 gal/A min volume.
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pt/A  Apply with COC @ 2 pt/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	<b>Green and dry bulb onions.</b> Apply to actively growing grasses before recommended heights are exceeded; consult label. Adjust pressure (40-60 psi), spray volume (5-20 gal/A) and height of spray boom to ensure thorough coverage. <b>Do not apply within 30 days of harvest.</b> Do not apply more than 4.5 pt/A/season. Rainfast in 1 hour. Should be used with caution because of potential of leaf injury when temperatures exceed 90°F and relative humidity is 60% or higher, or the temperature exceeds 100°F.
pendimethalin @ 0.75-1.5 lbs/A	Prowl/Pendimax 3.3EC @ 1.2 pts/A on coarse soil 2.4 pts/A on medium soil 3.6 pts/A on fine soil Prowl H2O @ 1.0 pts/A on coarse soil 2.0 pts/A on medium soil 3.0 pts/A on fine soil	Many small seeded grasses and broadleaves	<b>Dry bulb onions direct seed or transplant.</b> Apply between the 2-9 true leaf stage. Do not apply within 45 days of harvest. Treatments are most effective when not more than 0.5" rainfall or overhead irrigation is received within 7 days after application. Heavy rains after application can cause crop injury.

## VEGETABLE WEED MANAGEMENT

### ONION<sup>3,4,5,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A  Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds	Apply with a hooded sprayer in row middles, as shielded sprayer in row middles, as wiper applications in row middles or post harvest. To avoid severe injury to the crop do not allow herbicide to contact foliage, green shoots, stems, exposed roots or fruit of crop. Do not apply with 14 days of harvest.
carfentrazone-ethyl @ 0.012–0.024 lb/A	Aim 2EC @ 0.75-1.5 oz/A Aim 40DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC at 1 gal/100 gal	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Coverage is critical.
trifluralin @ 0.375-0.625 lb/A	Treflan HFP 4EC, Trifluralin 4EC, Trilin 4EC @ 0.75 pt/A on light oil 1.25 pt/A on med-heavy soil	Many small seed grasses and broadleaves	<b>Dry bulb onions direct seed or transplant.</b> Apply to row middles with shields. Incorporate within 1 day of application. Rate varies by soil type. Avoid contacting roots, bulbs or foliage with spray.

## VEGETABLE WEED MANAGEMENT

PEPPERS<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
trifluralin <sup>2</sup> @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med 2.0 pts/A on heavy soil 60 DF products @ 0.87 lb/A on light soil 1.33 lbs/A on medium soil 1.66 lbs/A on heavy soil	Many small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	<b>Bell and hot pepper trans-plants only:</b> Incorporate thoroughly in top 2" of soil just before trans-planting.
oxyfluorfen @ 0.5-1.0 lbs/A	Goal @ 1-2 pts/A	Broadleaf weeds, some grasses, geranium, and cutleaf evening-primrose.	<b>Bell and hot pepper trans-plants only: Plastic culture only.</b> Apply to soil surface on preformed beds at least 30 days prior to transplanting. Incorporation is not necessary, but it may result in less crop injury. Best results are obtained if plastic is applied soon after application.
pendimethalin @ 0.75-1.5 lbs/A	Prowl H2O @ 1.0-1.5 pt/A on coarse soil 1.5-2.0 pt/A on medium soil 2.0-3.0 pts/A on fine soil	Many small seeded grasses and broadleaves	Apply before transplanting, but not under plastic. <b>Do not apply before direct seeding hot peppers.</b> Incorporation is beneficial when rainfall does not occur to activate.
napropamide <sup>2</sup> @ 1-2 lb/A	Devrinol 50DF @ 2 lb/A on light soil 4 lb/A on heavy soil Devrinol 2EC @ 0.5 gal/A on light soil 1.0 gal/A on heavy soil	Many small-seeded annual grasses and broadleaves.	<b>Hot pepper only:</b> Can be used on direct-seeded or transplanted crops. Apply to well worked soil and incorporate 1-2 inches in the same day.
clomazone @ 0.25-1.0 lb/A	Command 3ME @ 0.67-2.67 ptsA	Most annual grasses and some small seeded broadleaf weeds	<b>Bell and hot pepper (except banana):</b> Do not use on banana peppers. Incorporate 1 inch or less before planting. Plant seed or transplants below the chemical barrier. Foliar contact with spray drift may cause temporary whitening of plants. Whitening may persist on some plants. Do not apply Command 3ME within 1,200 sensitive areas, see label.
Metolachlor @ 0.48 – 0.95 lb/A	Dual Magnum 7.62 EC @ 0.5 – 1.0 pt/A	Most annual grasses and some small seeded broadleaf weeds as well as yellow nutsedge	<b>Special local need label. Bell and non-bell peppers excluding tabasco.</b> Apply broadcast preplant <u>non-incorporated</u> prior to transplanting. No activity on existing weeds. Apply to weed-free prepared area prior to weed emergence.

## VEGETABLE WEED MANAGEMENT

PEPPERS<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE:</b>			
halosulfuron @ 0.024-0.048 lb/A	Sandea @ 0.5 - 1 oz/A  Apply with NIS @ 1 qt/100 gal	Nutsedge and some broadleaf weeds	<b>Bell and hot pepper trans-plants only: Apply to row middles between plastic only.</b> Don't allow Sandea to contact the crop or plastic. Early season application will give post- and pre-emerge control. Do not apply more than 2 oz/A in a 12-month period. Long residual. Check label for recrop intervals.
<b>POSTEMERGENCE:</b>			
Metolachlor @ 0.48 – 0.95 lb/A	Dual Magnum 7.62 EC @ 0.5 – 1.0 pt/A	Most annual grasses and some small seeded broadleaf weeds as well as yellow nutsedge	<b>Special local need label for Louisiana. Labeled for bell and non-bell peppers excluding tabasco.</b> Apply broadcast <u>within 48 hours after transplanting</u> . No activity on existing weeds. Apply to weed-free prepared area prior to weed emergence.
clethodim @ 0.1 - 0.125 lb/A	Select, Arrow @ 6 - 8 oz/A Select Max @ 9-16 oz/A  Apply with COC at 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	<b>Bell and hot pepper trans-plants only:</b> Apply to actively growing grasses. Rainfast in 1 hour. Days to harvest=20. Do not apply more than 8 oz/A per application. Allow 14-days between applications.
fluzifop @ 0.094-0.375 lb/A	Fusilade DX @ 0.375 - 1.5 pt/A  Apply with COC @ 1-2 pt/25 gal or 0.5-1 pt/25 gal NIS  Pump up sprayer: 0.75 oz/gal Fusilade + 1.5 oz/gal COC or 1/2 oz/gal NIS	Annual and perennial grasses	<b>Not labeled on bell peppers. Special local need label for Louisiana.</b> Use on Tabasco, other hot, and non-bell type peppers. Apply to actively growing grasses before they exceed the recommended stages; consult label. Use sufficient spray volume (5-40 gals/A) and pre-sure (40-60 psi) to ensure complete coverage. Do not harvest within 45 days after application. Do not apply more than 48 oz/A/season Fusilade DX. When grass foliage is dense, use 60 psi & minimum of 20 gal/A. Best coverage is obtained when two nozzles are used, one directed to each side of the row.
halosulfuron @ 0.024-0.048 lb/A	Sandea @ 0.5 - 1 oz/A + NIS at 1 qt/100 gals.	Nutsedge and some broadleaf weeds	<b>Bell and hot pepper trans-plants only: Apply to row middles between plastic only.</b> Don't allow Sandea to contact the crop or plastic. Early season application will give post- and pre-emerge control. Do not apply more than 2 oz/A in a 12-month period. Long residual. Check label for recrop intervals. 30 days to harvest.

## VEGETABLE WEED MANAGEMENT

PEPPERS<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
sethoxydim @ 0.1-0.3 lb/A	Poast @ 0.5-1.5 pts/A  Apply with 2 pt/A COC  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC.	Annual and perennial grasses	<b>Bell and hot pepper trans-plants only:</b> Apply actively growing grasses before they exceed recommended heights; consult label. Adjust pressure (40-60 psi), spray volume (5-20 gals/A) and height of spray boom to ensure thorough coverage. 20 days to harvest. Do not apply more than 4 1/2 pts/A/season. Crop oil should be used with caution because of potential leaf injury when temperature exceeds 90°F and the relative humidity is 60% or higher, or anytime the temperature exceeds 100°F. Rainfast in 1 hour.
<b>DIRECTED POSTEMERGENCE:</b>			
Metolachlor @ 1.23 – 2.48 lb/A	Dual Magnum 7.62 EC @ 1.3 – 2.6 pt/A	Most annual grasses and some small seeded broadleaf weeds as well as yellow nutsedge	<b>Special local need label. Postemergence directed spray at layby in tabasco peppers only.</b> Do <u>not</u> apply over the top or as a band over tabasco peppers. Dual has no activity on emerged weeds. Apply to weed-free tilled or plowed soil.
pendimethalin @ 0.75-1.5 lbs/A	Prowl H2O @ 1.0-1.5 pt/A on coarse soil 1.5-2.0 pt/A on medium soil 2.0-3.0 pts/A on fine soil	Many small seeded grasses and broadleaves	Apply to row middles as a directed spray. Avoid contact with foliage and stems. 70 days to harvest.
paraquat @ 0.49 lb/A	Gramoxone Inteon @ 2 pt/A Firestorm, Parazone @ 1.3 pt/A  Apply with NIS @ 1 pt/100 gal or COC @ 1 gal/100 gal  Pump up sprayer: 0.50 oz/gal paraquat + 0.33-0.5 oz/gal NIS or 1.3 oz/gal COC	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennials.	<b>Bell and hot pepper trans-plants only:</b> Apply to row middles using shields or hooded sprayers. Apply when weeds are 1-6" high. 30 days to harvest. Use 20-100 gals water/A. Do not exceed 30 PSI if prone to drift. Do not apply more than 3 times per season. Do not feed or allow animals to graze treated areas.
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 1.9 or 2 EC @ 0.75-1.5 oz/A  Apply with COC @ 1 gal/100 gal or NIS at 2 pt/100 gal	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	<b>Bell and hot pepper trans-plants only:</b> Apply to row middles using shields or hooded sprayers. Most effective when weeds are less than 4 inches tall or rosettes are less than 3 inches across. Injury will occur if crop is sprayed. Good coverage equals good weed control.
glyphosate @ 0.5-0.94 lb/A	Roundup Weathermax @ 11-22 oz/A	Most emerged weeds.	<b>Bell and hot pepper trans-plants only:</b> Apply to row middles only with a hooded sprayer, shielded sprayer or a wiper applicator. Can be used post-

**VEGETABLE WEED MANAGEMENT****PEPPERS<sup>4,5,6,7</sup>**

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
	Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A		harvest. Severe injury will occur if herbicide contacts foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.

## VEGETABLE WEED MANAGEMENT

### SHALLOTS (dry bulbs)

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
bensulide @ 5-6 lb/A	Prefar 4 EC @ 5 qt/A on light soil 6 qt/A on medium-fine soil	Some broadleaf and annual grasses	Incorporate to a depth of 1-2" before planting.
<b>PREEMERGENCE:</b>			
bensulide @ 5-6 lb/A	Prefar 4 EC @ 5 qt/A on light soil 6 qt/A on medium-fine soil	Some broadleaf and annual grasses	Apply preemergence only on crops where application is followed by immediate irrigation.
<b>POSTEMERGENCE:</b>			
sethoxydim @ 0.1-0.3 lb/A	Poast @ 0.5-1.5 pts/A  Apply with 2 pt/A COC  Pump up sprayer: 1.3-2 oz/gal Poast +1.3 oz/gal COC	Annual and perennial grasses	Apply actively growing grasses before they exceed labeled heights; consult label. Adjust equipment to ensure thorough coverage. Don't apply more than 4 1/2 pts/A/season. Use with caution because of potential leaf injury when temperature exceeds 90°F and the RH is 60% or higher, or anytime the temperature exceeds 100°F. Rainfast in 1 hour. 30 days to harvest.
clethodim @ 0.1 - 0.125 lb/A	Select, Arrow @ 6 - 8 oz/A Select Max @ 9-16 oz/A  Apply with COC at 1 gal/100 gal	Annual and perennial grasses	Apply to actively growing grasses. Rates vary by species, stage and region; consult label. Rainfast in 1 hour. Do not apply more than 0.5 lb ai/A/ season. Days to harvest = 45. Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC
dimethenamid-p @ 0.6 – 1.0 lb/A	Outlook 6 EC @ 12 – 24 oz/A	Most annual grasses and some broadleaf weeds	Do not apply until transplants from bulbs have reached the 2 true leaf stage and the soil has settled around transplants for several days to recover. Do not apply more than 21 oz/A/season. Check label for tank-mixes and rotational restrictions.
pendimethalin @ 0.75-1.5 lbs/A	Prowl/Pendimax 3.3EC @ 1.2 pts/A on coarse soil 2.4 pts/A on medium soil 3.6 pts/A on fine soil Prowl H2O @ 1.0 pts/A on coarse soil 2.0 pts/A on medium soil 3.0 pts/A on fine soil	Many small seeded grasses and broadleaves	Apply after crop reaches 2-9 leaf stage. Do not apply within 45 days of harvest. Most effective when rainfall or overhead irrigation is received within 7 days.
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds.	Apply to row middles only with a hooded sprayer, shielded sprayer or a wiper applicator. Severe injury will occur if herbicide contacts foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.

## VEGETABLE WEED MANAGEMENT

### SOUTHERN PEAS<sup>3,4,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
s-metolachlor <sup>2</sup> @ 1.0-2.0 lb/A	Dual Magnum, Dual II Magnum @ 1 pt/A on light soil 1.5 pt/A on medium soil 2.0 pt/A on heavy soil	Many small seeded grasses, yellow nutsedge, pigweed, carpetweed.	Incorporate 2 inches deep before planting. Check label for tank mixes with other herbicides. Combine with another herbicide to increase spectrum of broadleaf weed control.
metolachlor <sup>2</sup> @ 1-2 lb/A	Medal, Stalwart, Parallel, Charger 1 pt/A on light soil 1.5 pt/A on medium soil 2.0 pt/A on heavy soil	Many small seeded grasses, yellow nutsedge, pigweed, carpetweed.	Incorporate 2 inches deep before planting. Check label for tank mixes with other herbicides. Combine with another herbicide to increase spectrum of broadleaf weed control.
pendimethalin @ 0.5-1.5 lb/A	Prowl 3.3 EC @ 1.2-1.8 lb/A on coarse soil 1.8-2.4 lb/A on medium soil 1.8-3.6 lb/A on fine soil  Prowl H2O 1.5 PT/A on coarse soil 2.0 PT/A on medium soil 3.0 PT/A on fine soil	Annual grasses and broadleaf weeds	Incorporate thoroughly into the top 1-2" of soil up to 60 days prior to planting. Do not use preemergence. Cold wet soil conditions after planting may increase risk of crop injury. Check label for tank-mixes with other herbicides.
imazethapyr @ 0.064 lbs/A	Pursuit 2 EC @ 4 oz/A Pursuit 70 DG @ 1.5 oz/A	Several broadleaf weeds and reduces competition from morningglories.	Incorporate before planting. May cause crop injury. Use of Pursuit is at the user and/or grower risk. The use of trifluralin with Pursuit may increase the likelihood and severity of crop damage. Do not make more than one application of Pursuit for a year. Allow 30 days between application and harvest.
trifluralin <sup>2</sup> @ 0.5-.1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1pt/A on light soil 1.5 pts/A on med 2.0 pts/A on heavy soil  60 DF products @ 0.87 lb/A on light soil 1.33 lbs/A on medium soil 1.66 lbs/A on heavy soil	Many small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Incorporate thoroughly in top 2" of soil just before planting. Cold, wet soil conditions after planting increase the risk of crop injury. Check label for rates of other trifluralin formulations.
<b>PREEMERGENCE:</b>			
s-metolachlor @ 1.0-2.0 lb/A	Dual Magnum, Dual II Magnum @ 1 pt/A on light soil 1.5 pt/A on medium soil 2.0 pt/A on heavy soil	Many small seeded grasses, yellow nutsedge, pigweed, carpetweed.	Apply after planting before weeds and crop emerge. Combine with other herbicides for improved broadleaf control; consult label. More effective on nutsedge when incorporated before planting.

## VEGETABLE WEED MANAGEMENT

### SOUTHERN PEAS<sup>3,4,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE: continued</b>			
metolachlor @ 1.0-2.0 lb/A	Medal, Stalwart, Parallel, Charger 1 pt/A on light soil 1.5 pt/A on medium soil 2.0 pt/A on heavy soil	Many small seeded grasses, yellow nutsedge, pigweed, carpetweed.	Apply after planting before weeds and crop emerge. Combine with other herbicides for improved broadleaf control; consult label. More effective on nutsedge when incorporated before planting.
imazethapyr @ 0.064 lbs/A	Pursuit 2 EC @ 4 oz/A Pursuit 70 DG @ 1.5 oz/A	Several broadleaf weeds and reduces competition from morningglories.	Apply after planting before crop and weeds emerge. May cause crop injury. Use of Pursuit is at the user and/or grower risk. The use of trifluralin prior to Pursuit may increase the likelihood and severity of crop damage. Do not make more than one application of Pursuit for a year. 30 days to harvest.
<b>POSTEMERGENCE:</b>			
quizalofop p-ethyl @ 0.04-0.08 lb/A	Assure II 0.88EC @ 6-12 oz/A  Apply with COC @ 1gal/100 gal or NIS @ 1 qt/100 gal	Annual and perennial weeds.	Apply to actively growing grasses; consult label for application timing. COC may increase the likelihood of crop injury at high temperatures. Do not apply on unusually hot and humid days. 30 days to harvest.
bentazon @ 0.5 – 1.0 lb/A	Basagran 4SL @ 1.0 -2.0 pt/A	Annual broadleaf weeds and yellow nutsedge	Apply over the top when peas have at least 3 pairs of leaves. Do not add crop oil concentrate to the spray solution. Do not apply within 30 days of harvest. Do not apply when peas are in bloom.
imazethapyr @ 0.032- 0.064 lbs/A	Pursuit 2 EC @ 2-4 oz/A Pursuit 70 DG @ 0.72 - 1.44 oz/A  Apply with NIS @ 2 pt/100 gal; Do not use COC or MSO	Several broadleaf weeds and reduce competition from morningglories.	Apply when peas are at least 3" tall, but before 5 nodes and flowering. Apply when weeds are 1-3 inches tall or have 1-4 leaves. May cause crop injury; user and/or grower assumes the risk. The use of trifluralin prior to Pursuit application may increase the likelihood and severity of crop damage. Check label for maximum number of leaves at which weeds should be sprayed post emergence. Do not make more than one application of Pursuit for a year. Allow 30 days between application and harvest.
sethoxydim @ 0.1-0.3 lb/A	Poast @ 0.5-1.5 pts/A  Apply with 2 pt/A COC  Pump up sprayer: 1.3-2 oz/gal Poast +1.3 oz/gal COC	Annual and perennial grasses	Apply at to small grasses; consult label for application timing. Do not apply on days that are hot and humid. Do not apply within 15 days of harvest.
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A AIM 40 DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Directed applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control.

## VEGETABLE WEED MANAGEMENT

### SOUTHERN PEAS<sup>3,4,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE: continued</b>			
glyphosate @ 0.5-0.94 lb/A	Various 4 L brands @ 16-30 oz/A Various 5 L brands @ 11-24 oz/A	Most emerged weeds.	Apply to row middles only with a hooded sprayer, shielded sprayer or a wiper applicator. Severe injury will occur if herbicide contacts foliage, green shoots, stems, exposed roots or fruit.

## VEGETABLE WEED MANAGEMENT

### SPINACH<sup>3</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT INCORPORATED:</b>			
cycloate @ 3 lb/A	RoNeet 6EC @ 2 qt/A	Annual grasses and broadleaves	Incorporate 2 to 3 inches before planting.
<b>POSTEMERGENCE:</b>			
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pt/A	Annual and perennial grasses.	Apply actively growing grasses before they exceed labeled heights; consult label. Adjust pressure (40-60 psi), volume (5-20 gals/A) and boom height to ensure thorough coverage. Don't apply more than 3 pt/A per season. COC should be used with caution because of potential leaf injury when temperature exceeds 90°F and the relative humidity is 60% or higher, or anytime the temperature exceeds 100°F. Rainfast in 1 hour. 15 days to harvest.
	Apply with COC @ 2 pt/A	Does not control annual bluegrass	
	Pump up sprayer: 2 oz/gal Poast + 1.3 oz/gal COC		
clethodim @ 0.1 - 0.125 lb/A	Select, Arrow @ 6 - 8 oz/A Select Max @ 9-16 oz/A	Annual and perennial grasses	Apply to actively growing grasses. Rates vary by grass species and stage; consult label. Rain fast in 1 hour. Do not apply more than 0.50 lb ai/A/year. Adding COC increases chances of crop injury, especially at high temperatures.
	Apply with COC at 1 gal/100 gal		
	Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC		
clopyralid @ 0.125-0.187 lb/A	Stinger 3 EC @ 0.66-0.5 pt/A	Broadleaf weeds	Apply to spinach in the 2-5 leaf stage when weeds are small and actively growing. Do not apply within 21 days of harvest. Will control most legumes.
phenmedipham @ 0.4-1.0 lb/A	Spin-Aid @ 3-6 pts/A	Selected broadleaf weeds	Apply to actively growing weeds in 11-22 gals/A of water when weeds are at the 2 leaf stage and spinach is past the 4-6 true leaf stage. Split rate: apply at 2-leaf stage of spinach, repeat 4-6 days later with 3 pt/A. May cause injury if the crop is under stress. Use when temperatures are below 75F and spray just before sunset to prevent possible injury. Some injury, stunting, chlorosis or tip burn, may be seen. Crops usually resume growth in 10 days. 40 days to harvest.
	Split rate: 2.5-3 pts/A followed by 2.5-3 pts/A		
<b>DIRECTED POSTEMERGENCE:</b>			
glyphosate @ 0.5-0.94 lb/A	Various 4 L brands @ 16-30 oz/A	Most emerged weeds.	Apply to row middles only with a hooded sprayer, shielded sprayer or a wiper applicator. Severe injury will occur if herbicide contacts foliage, green shoots, stems, exposed roots or fruit. 14 days to harvest.
	Various 5 L brands @ 11-24 oz/A		
carfentrazone-ethyl @ 0.012 – 0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A AIM 40 DF @ .33-1.0 oz/A	Most emerged broadleaf weeds	Directed applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control.
	Apply with NIS @ 2 pt/100 gal	No grass control; can be mixed with grass herbicides	

## VEGETABLE WEED MANAGEMENT

### SWEET POTATOES

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT:</b>			
flumioxazin @ 0.063 – 0.079 lb/A	Valor SX @ 2-2.5 oz/A	Smellmelon, prickly sida, copperleaf, pigweeds  May suppress annual sedges	Apply before transplanting to a clean seed bed. <b>Do not apply post-transplant as foliar burn will occur.</b>
<b>POST-TRANSPLANT:</b>			
clomazone @ 0.5-1.0 lbs/A	Command 3ME @ 1.33-2.33 pt/A	Annual grasses and broadleaf Weeds	Apply after transplanting before weeds emerge. Do not apply within 1,200 feet of sensitive areas; consult label. Sedges may become more problematic when Command is used. 125 days to harvest. Consult label for re-crop intervals.
s-metolachlor @ 1.0-2.0 lb/A	Dual Magnum @ 1.0 pt/A on light soil 1.33 pt/A on med-heavy soil	Many small seeded grasses, yellow nutsedge, pigweed, carpetweed	Apply after transplanting before weeds emerge. Don't incorporate. Injury potential increases on sandy or loamy sand soils, especially if heavy rainfall occurs shortly after application. If irrigation is used, don't apply more than ½ inch of water following a Dual Magnum application.
fluzifop @ 0.094-0.375 lb/A	Fusilade DX @ 0.375-1.5 pt /A  Apply with COC @ 1-2 pt/25 gal or NIS @ 0.5-1 pt/25 gal	Annual and perennial grasses	Apply to actively growing grasses before they exceed the labeled growth stages. Use sufficient volume (5-40 gals/A) and pressure (40-60 psi) to ensure complete coverage. 55 days to harvest. Maximum season use rate is 48 oz/A.
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pts/A  Apply with COC @ 2 pt/A  Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	Apply actively growing grasses before they exceed labeled heights; consult label. Adjust pressure (40-60 psi), volume (5-20 gals/A) and boom height to ensure thorough coverage. Don't apply more than 2.5 pt/A per season. COC should be used with caution because of potential leaf injury when temperature exceeds 90°F and the relative humidity is 60% or higher, or anytime the temperature exceeds 100°F. Rainfast in 1 hour. 30 days to harvest.
clethodim @ 0.1 - 0.125 lb/A	Select @ 6 - 8 oz/A Select Max @ 9-16 oz/A  Apply with COC at 1 gal/100 gal  Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses. Rates vary by grass species and stage; consult label. Rain fast in 1 hour. 30 days to harvest.

## VEGETABLE WEED MANAGEMENT

### TOMATOES<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT/PREPLANT INCORPORATED:</b>			
S-metolachlor @ 0.95-1.58	Dual Magnum, Charger Basic @ 1.0-1.33 pt/A on coarse soil 1.33-1.67 pt/A on med-fine soil	Many small seeded grasses, yellow nutsedge and pigweed	Incorporate before transplanting or apply to the top of pressed bed as the last step before laying plastic. Minimize soil disturbance while transplanting. Do not plant when wet, cool and unfavorable growing conditions exist. S-metolachlor may damage weak transplants.
halosulfuron-methyl @ 0.024-0.048 lbs/A	Sandea 75 DG @ 0.5-1.0 oz/A	Yellow and purple nutsedge and some broadleaf weeds.	Apply before transplanting to soil surface. For applications under plastic; apply to preformed beds just prior to laying plastic mulch. Delay transplanting at least 7 days. Use the 1 oz/A rate for row middles. Don't make more than two applications. Don't use more than 2 oz/A/12 months.
metribuzin @ 0.25- 0.5 lb/A	Sencor 4 L @ 0.5-1 pt/A Sencor DF, Metribuzin DF @ 0.33-0.66 lb/A DF	Many broadleaf weeds and some grasses	Apply at preplant incorporate; apply dosage in 10-40 gal of water/A as a broadcast spray to the soil surface immediately before transplanting. Incorporate 2-4" deep with equipment mixing the chemical into the soil. Check label for tank mixes.
pendimethalin @ 0.75-1.5 lb/A	Prowl H2O @ 1.0-1.5 pt/A on coarse soil 1.5-2.0 pt/A on medium soil 1.5-3.0 pt/A on fine soil	Small seeded annual grasses and many broadleaf weeds	Apply before transplanting. Do not use under plastic mulch. If rainfall does not occur to activate herbicide, mechanical incorporation will be beneficial.
pebulate @ 4-10 lb/A	Tillam 6-E @ 2.66-6.66 qt/A	Some broadleaf weeds, annual grasses, purple and yellow nutsedge	Incorporate immediately after application. Can be used before mechanical transplanting. Check label for tank-mixes with other herbicides. Transplants may be set by hand if chemical resistant gloves are worn.
oxyfluorfen @ 0.5-1.0 lb/A	Goal 2 XL @ 1-2 pts/A	Broadleaf weeds, some grasses, Carolina geranium, and cutleaf eveningprimrose.	<b>Plastic culture only:</b> Apply to soil surface on preformed beds at least 30 days prior to trans-planting. Incorporation is not necessary, but it may result in less crop injury. Best results are obtained if plastic applied soon after application.
trifluralin <sup>2</sup> @ 0.5-.1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med 2.0 pts/A on heavy soil 60 DF products @ 0.87 lb/A on light soil 1.33 lbs/A on medium soil 1.66 lbs/A on heavy soil	Many small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Incorporate thoroughly into top 2" of soil just before planting. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

### TOMATOES<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE:</b>			
rimsulfuron @ 0.25-0.5 oz/A	Matrix 25 WDG @ 1-2 oz/A Apply with NIS @ 1 qt/100 gal	Most broadleaf weeds.	Apply after the tomato plants have 2 true leaves. Weeds should be no more than 1" tall and actively growing. Do not apply within 45 days of harvest. See label for further instructions.
sethoxydim @ 0.1-0.3 lbs/A	Poast @ 0.5-1.5 pts/A Apply with COC @ 2 pt/A Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses	Apply actively growing grasses before they exceed labeled heights; consult label. Adjust pressure (40-60 psi), volume (5-20 gals/A) and boom height to ensure thorough coverage. Don't apply more than 4.5 pt/A per season. COC should be used with caution because of potential leaf injury when temperature exceeds 90°F and the relative humidity is 60% or higher, or anytime the temperature exceeds 100°F. Rainfast in 1 hour. 20 days to harvest.
halosulfuron @ 0.024-0.048 lb/A	Sandea 75 DG @ 0.5-1.0 oz/A Apply with NIS @ 1 qt/100 gal	Yellow and purple nutsedge and broadleaf weeds.	Apply overtop 14 days after transplanting before bloom. If direct seeded apply after the 4-leaf stage before first bloom. Use shields to minimize crop contact after bloom. Can be applied to row middles at 1 oz/A; avoid contact with crop and/or plastic. If a second application is needed for nutsedge, spot treat only weed infested areas. Don't make more than two applications. Don't use more than 2 oz/A/12 months. 30 days to harvest.
clethodim @ 0.1 - 0.125 lb/A	Select @ 6 - 8 oz/A Select Max @ 9-16 oz/A Apply with COC at 1 gal/100 gal Pump up sprayer: 0.33 to 0.66 oz/gal Select + 1.3 oz/gal COC	Annual and perennial grasses	Apply to actively growing grasses. Rates vary by grass species and stage; consult label. Rain fast in 1 hour. 20 days to harvest.
metribuzin @ 0.25-0.5 lb/A	Sencor 4L @ 0.5-0.75 pt/A Sencor DF, Metribuzin DF @ 0.33-0.5 lb/A DF	Many broadleaf weeds and annual grasses	Don't use on seeded crops before the 5-6 leaf stage. Don't use on transplants until they have recovered and new growth is evident. Apply in 20 or more gallons of water. Allow 14 days between applications to avoid severe injury. Don't apply within 24 hours or mix with other pesticides. Don't use more than 1.33 lb/A/season; or apply 1.33 lb/A within a 35 day period unless a portion of that is directed. Don't use hot caps within 7 days of application; or anytime afterwards. Don't apply within 3 days of cool, wet or cloudy weather. 7 days to harvest.

## VEGETABLE WEED MANAGEMENT

TOMATOES<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE:</b>			
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Coverage is critical.
S-metolachlor @ 0.95-1.58	Dual Magnum, Charger Basic @ 1.0-1.33 pt/A on coarse soil 1.33-1.67 pt/A on med-fine soil	Many small seeded grasses, yellow nutsedge and pigweed  Will not control emerged weeds.	Apply as a directed spray after the first rain or irrigation settles soil around transplants. Minimize contact with transplants. Apply in 20 gal/A of water. 90 days to harvest. May damage weak transplants. May be applied to row middles. Do not exceed the maximum allowed rate on label.
paraquat @ 0.49 lb/A	Gramoxone Inteon @ 2 pt/A Firestorm, Parazone @ 1.3 pt/A  Apply with NIS @ 1 pt/100 gal or COC @ 1 gal/100 gal  Pump up sprayer: 0.50 oz/gal paraquat + 0.33-0.5 oz/gal NIS or 1.3 oz/gal COC	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennials.	Apply to row middles using shields or hooded sprayers. Apply when weeds are 1-6" high. 30 days to harvest. Use 20-100 gals water/A. Don't exceed 30 PSI. Don't apply more than 3 times/season. Don't feed or graze treated areas. Use 20-100 gals of water/A. Do not apply more than 3 times per season. Do not allow animals to graze on treated areas. Do not exceed 30 psi nozzle pressure or spray under conditions that may cause excessive drift.
metribuzin @ 0.5-1 lb/A	Sencor 4L @ 1-2 pt/A 4L Sencor DF, Metribuzin DF @ 0.66-1.33 lb/A	Many broadleaf weeds and annual grasses	Direct spray on established tomatoes; avoid contact with foliage. This treatment is recommended for fields with a history of heavy weed pressure or difficult to control weeds. <b>See "POSTEMERGENCE" section for precautions.</b>
carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control; can be mixed with grass herbicides	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control.
trifluralin <sup>2</sup> @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1 pt/A on light soil 1.5 pts/A on med 2.0 pts/A on heavy soil  60 DF products @ 0.87 lb/A on light soil 1.33 lbs/A on medium soil 1.66 lbs/A on heavy soil	Many small-seeded annual grasses, broadleaf weeds & seedling johnsongrass	Apply as a directed spray between rows and beneath plant and incorporate. Check label for tank-mixes with other herbicides.

## VEGETABLE WEED MANAGEMENT

### TOMATOES<sup>4,5,6,7</sup>

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<b>DIRECTED POSTEMERGENCE: continued</b>			
trifloxysulfuron-sodium @ 0.0047-0.0094 lb/A	Envoke 75 DG @0.1-0.2 oz/A  Apply with NIS @ 1 qt/100 gal	Nutsedge and broadleaf weeds	Apply as a directed spray on tomatoes grown on plastic. Crop should be transplanted for 14 days before application. Make application before fruit set and 45 days before harvest. See label for information on tank mixes with other herbicides.
pendimethalin @ 0.75-1.5 lb/A	Prowl H2O @ 1.0-1.5 pt/A on coarse soil 1.5-2.0 pt/A on medium soil 1.5-3.0 pt/A on fine soil	Small seeded annual grasses and many broadleaf weeds	Direct spray to row middles, avoiding contact with foliage or stems. If rainfall does not occur to activate herbicide, mechanical incorporation will be beneficial. Do not apply within 70 days of harvest.

## VEGETABLE WEED MANAGEMENT

### VEGETABLE CROP FOOTNOTES

<sup>1</sup>Apply specific dosage of herbicide in 50-100 gallons of water per acre.

<sup>2</sup>Better results have been obtained with incorporated herbicides when chemical are applied broadcast and incorporated at the correct depth. The row are then pulled up and planted.

<sup>3</sup>Beans, beets, carrots, cole crops, garlic, greens, lettuce, okra, onions, Irish potatoes, spinach, sweet corn, and sweet potatoes. Various brands of glyphosate- Rattler, Touchdown, Glyphomax, Glyphosate, Roundup Ultramax, Roundup Ultra. Check product label for rates. May be used before planting or before crop emergence. Application should be made on spray to wet basis, but not to point of runoff. Prior to transplanting crops into plastic mulch, remove product residue from plastic.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
<sup>4</sup> paraquat @ 0.49 lb/A	Gramoxone Inteon @ 2 pt/A Firestorm, Parazone @ 1.3 pt/A  Apply with NIS @ 1 pt/100 gal or COC @ 1 gal/100 gal  Pump up sprayer: 0.50 oz/gal paraquat + 0.33-0.5 oz/gal NIS or 1.3 oz/gal COC	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennials.	Apply before planting in a min. of 20 gallons of water/A to ensure good coverage. Minimize soil disturbance when planting. Labeled crops are: beans, carrots, cole crops, cucumbers, eggplant, greens, lettuce, melons, onions, peppers, Irish potatoes, pumpkins, squash, sweet corn and tomatoes.
<sup>5</sup> oxyfluorfen @ 0.5-1.0 lbs/A	Goal @ 1-2 pts/A	Broadleaf weeds, some grasses, geranium, and cutleaf evening- primrose.	Fallow bed treatment for carrots, Irish potatoes, onions, cabbage, cauliflower, pepper, tomato, cantaloupe, squash, watermelon, other cucurbits, broccoli and garlic. Apply to clean, smooth beds in the fall. Must be activated by 0.25 inches of rainfall. Consult label for planting intervals. Beds must be worked at least 2 inches deep before planting.
<sup>6</sup> paraquat @ 0.6-0.94 lb/A	Gramoxone Inteon @ 2.4-3.7pt/A Firestorm, Parazone @ 1.6-2.5 pt/A  Apply with NIS @ 1 qt/100 gal	Emerged small annual broadleaf weeds and grasses. Top kill and suppression of perennials.	Apply after harvest to desiccate vegetable crop residue. Can be used on all vegetable crops. Thorough coverage is required. Do not feed treated crop to animals or humans. Do not allow livestock to graze treated areas.
<sup>7</sup> carfentrazone-ethyl @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A Aim 40 DF @ .33-1.0 oz/A  Apply with NIS @ 2 pt/100 gal or COC @ 1 gal/100	Most emerged broadleaf weeds  No grass control; can be mixed with other herbicides	Apply before planting. Can be used on all vegetable crops. Most effective when weeds are less than 4 in. tall. Good coverage equals good weed control. Can be mixed with other burndown materials.