

Vegetable Crops

Artichoke: Table 1. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
pronamide @ 2-4 lbs/A	Kerb 50 W @ 4-8 lbs/A	Broadleaf weeds, annual grasses.	Apply after transplanting but before new shoots develop three to four new leaves. Do not apply within 60 days of harvest. Refer to label for plant back restrictions.

Artichoke: Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 seven days of harvest. Use with caution when temperatures exceed 90 F and relative humidity is 60% or higher because of potential leaf injury. Not recommended when temperatures exceed 100 F.

Artichoke: Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
oxyfluorfen @ 1-1.5 lbs/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 and postemergence to the eight-leaf stage.	Do not apply over the top. Apply as a directed spray to the soil surface between rows and at the base of the plant in 40 GPA. Separate applications by eight to 10 weeks or a single application can be made. Check label for rates.
pronamide @ 2-4 lbs/A	Kerb 50 W @ 4-8 lbs/A	Broadleaf weeds, annual grasses.	Application may be 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 lb/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 GPA. Surfactant is required; consult label. Do not apply within 24 hours of harvest. Do not exceed three applications per 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.

Asparagus: Table 1. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 lbs/A on light soil; 2-4 lbs/A clay	Annual broadleaf and grass weeds	Apply no earlier than four 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.
linuron @ 1.0-2.0 lbs/A	Lorox 50 DF @ 2-4 lbs/A	Most small-seeded annual grasses and broadleaf weeds.	Established beds apply before cutting season. Lorox can be used on newly planted crowns. One day to harvest.
paraquat @ 0.63-1.0 lb/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 in a minimum of 20 GPA to control emerged weeds before spears emerge or after last harvest.
metribuzin @ 1-2 lbs/A	Sencor 4 FL@ 2-4 pt/A; Sencor 75DF, Metribuzin 75DF @ 1.33-2.67 lbs/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 lb/A	Chateau @ 6 oz/A; Add NIS at 1 quart/100 gals if weeds are present	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 a minimum of 15 GPA.

Asparagus: Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 lbs/A on light soil; 2-4 lbs/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.
halosulfuron @ 0.024-0.072 oz/A	Sandea 75 DF or Profine 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.
fluazifop-P-butyl @ 0.1-0.375 lb/A	Fusilade DX @ 0.375-1.5 pt/AMix with COC @ 1-2 pts/25 gal or with NIS @ 0.5-1 pt/25 gal	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 pt/A/season.
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	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 gal. water/A. Use on asparagus at least 2 years old. Do not apply within six days of harvest.
sethoxydim @ 0.09-0.47 lbs/A	Poast 1.5 EC @ 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.	Apply to grasses before they exceed the recommended growth stages. Don't apply more than 5 pt./A/season. Should be used with caution when temperatures exceed 90 F and relative humidity is 60% or higher. May be applied one day before harvest.
clethodim @ 0.1-0.125 lbs/A	Select, Arrow, Intensity, Clethodim Max @ 12-16 oz/A; Mix with NIS @ 2 pt/100 gals	Annual and perennial grasses, annual bluegrass.	Check label for rates and restrictions on amount applied. For repeat applications, apply on a minimum 14-day interval. May be applied one day before harvest.

Asparagus: Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
linuron @ 0.5-1.0 lbs/A	Lorox 50 DF @ 1-2 lbs/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.

Asparagus: Table 4. Postharvest herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
metribuzin @ 1-lbs/A	Sencor 4 FL@ 2-4 pt/A; Sencor 75DF, Metribuzin 75 DF @ 1.33-2.67 lbs/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 lb/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 GPA to control emerged weeds. Use on asparagus at least 2 years old. Mix with NIS @ 1-2 pt/100 gal.
halosulfuron @ 0.024-0.072 oz/A	Sandea 75 DF or Profine 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.
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 lbs/A on light soil; 2-4 lbs/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.

Snap and Lima Beans: Table 1. Preplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor @ 0.95-1.9 lbs/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 inches 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 inches 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 ¹ @ 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 medium 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 medium soil; 2.1-3.2 pts/A on heavy soil	Many small-seeded grasses and broadleaves, including annual spurge, reduction from competition from smartweed and 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, smartweed and purslane.	May be tank-mixed with a grass herbicide. Check label for plant-back restrictions.
trifluralin ¹ @ 0.5-0.75 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 and seedling johnsongrass.	Incorporate thoroughly in top 2 inches of soil just before planting. Check label for tank-mixes with other herbicides.
alachlor ¹ @ 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 lbs/A on med-heavy soil	Small-seeded annuals.	Apply to lima beans only. May delay maturity and/or reduce yields if cold, wet soil conditions occur after planting. Check label for tank-mix options.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Snap and Lima Beans: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor @ 0.95-1.9 lbs/A	Dual Magnum, Dual II Magnum @ 1-1.3 pt/A on coarse soil; 1.3-1.67 pt/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 more than 3% organic matter; consult label.
metolachlor @ 0.98-1.63 lbs/A	Medal, Stalwart, Parallel, Charger @ 1.0-1.3 pt/A on coarse soil; @ 1.3-1.67 pt/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.	Apply to snap beans only. May be tank-mixed with a grass herbicide. Check label for plant-back restrictions.
halosulfuron-methyl @ 0.024-0.036 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-1.5 oz/A	Nutsedge and some broadleaf weeds.	Apply following planting; prior to cracking. Will provide residual weed control.
fomesafen @ 0.188 lb/A	Reflex 2 EC @ 1.5 pt/acre	Many broadleaf weeds.	Snap beans only. Apply preplant surface and preemergence. Check label for tank mixers. Total use cannot exceed 1.5 pt/A. Check label for instructions and precautions.

Snap and Lima Beans: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
quizalofop @ 0.04–0.08 lbs/A	Assure II @ 6-12 oz/A; Targa @ 6-12 oz/A; Mix with COC @ 1 gal/100 gal or with NIS @ 1 qt/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/A/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, green kyllinga, yellow nutsedge. No grass control.	Apply when weeds are small and actively growing after beans form two fully expanded trifoliate leaves. Do not apply to beans that have been subjected to stress (hail, flooding, drought, injury from other herbicides or widely fluctuating temperatures). Rates highly depend on size and age of weeds. Check label for more specific rates. Do not apply within 30 days of harvest. Two applications seven to 10 days apart may be required to control yellow nutsedge.
halosulfuron-methyl @ 0.024-0.036 lb/A	Sandea 75 DF or or Profine 75 DF @ 0.5-0.7 oz/A	Nutsedge and other broadleaf weeds.	Apply after the two- to three-trifoliate stage prior to flowering. May cause temporary stunting, which could delay maturity.
sethoxydim @ 0.1-0.47 lbs/A	Poast @ 0.75-2.5 pt/A; Mix with COC @ 2 pt/A; Pump up sprayer: 1/3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses.	Apply to actively growing grasses before they exceed labeled heights. Do not apply within 15 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 4 pt/A/year. Use caution when temperatures and relative humidity are high.
fomesafen @ 0.125-0.375 pt/A	Reflex 2 EC @ 0.5-1.5 pt/A; Mix with NIS @ 1qt/100 gal	Many broadleaf weeds.	Apply to snap beans only. Snap beans should have at least 1 expanded trifoliate leaf. Total use cannot exceed 1.5 pt/A. Do not apply within 30 days of harvest. See label for further instructions and tank-mixes.

Snap and Lima Beans: Table 4. Postharvest herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	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.

Beet: Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
cycloate ¹ @ 3-4 lbs/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 and broadleaf weeds.	Incorporate thoroughly in top 2 inches of soil five to seven days before planting.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Beet: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
pyrazon @ 3.2-3.7 lbs/A	Pyramin DF @ 4.6 lbs/A on light-med. soil; 5.4 lbs/A on heavy soil	Many small-seeded annual grasses and broadleaf weeds.	Apply after planting before weeds emerge. If rainfall does not occur within five to 10 days after treatment, beets should be irrigated or shallowly cultivated.
cycloate @ 3-4 lbs/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 and broadleaf weeds.	Apply at planting. Incorporate thoroughly in top 2 inches of soil five to seven days before planting to reduce risk of temporary crop injury.

Beet: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
pyrazon @ 3.2-3.7 lbs/A	Pyramin DF @ 4.6 lbs/A on light-med. soil; 5.4 lbs/A on heavy soil	Many small-seeded annual grasses and broadleaf weeds.	Apply after beets have two expanded true leaves and before any weeds have more than two to four true leaves.
sethoxydim @ 0.2-0.3 lb/A	Poast @ 1-1.5 pt/A; Mix with COC @ 2 pt/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 pt/A	Several broadleaf weeds.	Apply when beets are past the four- to six-leaf stage and weeds are at the two-leaf stage. Do not apply within 60 days of harvest.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clopyralid @ 0.187 lb/A	Solyx, Stinger 3 EC @ 0.5 pt/A	Broadleaf weeds; controls most legumes. Weak on cutleaf and evening primrose.	Apply to small actively growing weeds 30 days before harvest.
clethodim @ 0.094-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Mix with COC @ 1 gal/100 gal; Pump up sprayer: 0.33 to 0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 one hour. Wait at least 14 days before repeating applications.

Beet: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Apply using hoods or shields. Will injure contacted crops. Most effective on small weeds. Can be mixed with other herbicides.
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.

Beet: Table 5. Post harvest herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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.

Cole Crops (Cabbage, Cauliflower, Broccoli, Brussels Sprouts): Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
trifluralin ¹ @ 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 lbs./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 inches 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.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Cole Crops (Cabbage, Cauliflower, Broccoli, Brussels Sprouts): Table 2. Preplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
oxyfluorfen @ 0.25-0.5 lb/A	Goal 1.6E or 2XL, Galligan @ 1.0 pt/A on coarse soil; 2.0 pt/A on med to fine soil	Pennsylvania smartweed, pigweed, purslane and some grasses.	Transplants only. 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 lbs/A on light soil; 8-10 lbs/A on med soil; 10-14 lbs/A on heavy soil	Annual grasses and certain broadleaf weeds.	On direct-seeded crops, apply just before planting in at least 20 GPA. A minimum of 1/3-1/2 inch of water is necessary to activate within three to five days of application. If irrigation is unavailable, incorporate 1-2 inches to aid in weed control.

Cole Crops (Cabbage, Cauliflower, Broccoli, Brussels Sprouts): Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
sethoxydim @ 0.09-0.28 lb/A	Poast @ 0.5-1.5 pt/A; Mix with COC @ 2 pt/A; Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/A gal COC	Annual and perennial grasses.	Do not use on Brussels sprouts. 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 pt/A/year. Rainfast in one hour.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Mix with COC at 1 gal/100gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	Suggested for direct-seeded crops. Do not use on Brussels sprouts. Apply to actively growing grasses. For repeat applications, make on a minimum of 14-day intervals. Rainfast in one 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 lb/A	Stinger 3 EC @ 0.25-0.5 pt/A	Broadleaf weeds such as aster family plants and clovers.	Suggested for direct-seeded crops. Do not use on Brussels sprouts. Apply when weeds are small and actively growing. Do not apply within 30 days of harvest.

Cole Crops (Cabbage, Cauliflower, Broccoli, Brussels Sprouts): Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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.	Suggested for direct-seeded crops. Do not use on Brussels sprouts. 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 @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Do not use on Brussels sprouts. Apply using hoods or shields. Will injure contacted crops. Most effective on small weeds. Can be mixed with other herbicides.

Carrot: Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
trifluralin ¹ @ 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 lbs./A on medium soil; 1.6 lbs./A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass.	Incorporate thoroughly in top 2 inches of soil just before planting.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Carrot: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
linuron @ 0.5-1.5 lbs/A	Lorox DF @ 1.5 lbs./A on light soil; 2-2.5 lbs./A on medium soil; 3.0 lbs./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.

Carrot: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
linuron @ 0.5-1.5 lbs/A	Lorox DF @ 1.5 lbs/A on light soil; 2-2.5 lbs/A on medium soil; 3.0 lbs/A on heavy soil	Broadleaf weeds, some grasses and yellow nutsedge.	Apply after carrots are at least 3 inches tall and before grasses are 2 inches and broadleaves are 6 inches. 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 pt 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 gal/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 one 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 and 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 one hour.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clethodim @ 0.1-0.125 lbs/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Mix with COC @ 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 one 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.
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 five- to six-leaf stage but before weeds are 1 inch high. Do not apply within three 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 three weeks. Apply at least 60 days before harvest. Check label for crop rotation.
Stoddard solvent	Varsol @ 40-60 gal/A	Many annual grasses and broadleaf weeds.	Do not apply later than six weeks before harvest. Apply before weeds are 1 inch tall. Works best on warm sunny days.

Carrot: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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. Also, may 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 pt/A per season. Apply at least 60 days before harvest. Do not feed forage or graze livestock in treated fields.

Sweet Corn: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
atrazine @ 1-2.0 lbs/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 and 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 lbs/A + atrazine @ 1.63-2.0 lbs/A; S-metolachlor @ 1.25-1.83 lbs/A + atrazine @ 1-1.5 lbs/A	Bicep II Magnum @ 2.1-2.6 qt/A; Bicep Lite II Magnum @ 1.5-2.2 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.
alachlor @ 2-4 lbs/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 lbs/A on light soil; 4 lbs/A on medium soil; 6 lbs/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 lbs/A + atrazine @ 0.94-1.69 lbs/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 qt of Bullet/A per year.

Sweet Corn: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 pt/A on coarse soil; @ 1.3-1.67 pt/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 lbs/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.
atrazine @ 1-2.0 lbs/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 lbs/A + atrazine @ 1.63-2.0 lbs/A; S-metolachlor @ 1.25-1.83 lbs/A + atrazine @ 1-1.5 lbs/A	Bicep II Magnum @ 2.1-2.6 qt/A; Bicep Lite II Magnum @ 1.5-2.2 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.
alachlor @ 2-4 lbs/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 lbs/A on light soil; 4 lbs/A on medium soil; 6 lbs/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 lbs/A + atrazine @ 0.94-1.69 lbs/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.

Sweet Corn: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
dimethenamid @ 0.94 -1.5 lbs/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 inches tall and weeds exceed the two-leaf stage. Check with seed supplier for varietal tolerance. Consult label for approved tank-mixes.
atrazine @ 1-2.0 lbs/A	Rates as above. Apply with 1 pt/25 gal NIS or 1 qt/25 gal COC	Many small-seeded annual grasses and broadleaf weeds.	Apply before corn is 12 inches tall and pigweeds reach 6 inches and before other broadleaf weeds reach 4 inches and grasses reach 1.5 inches. 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 lbs/A + atrazine @ 1.25-2.0 lbs/A; S-metolachlor @ 0.91-1.58 lbs/A + atrazine @ 0.73-1.26 lbs/A	Bicep II Magnum @ 1.6-2.6 qt/A; Bicep Lite II Magnum @ 1.1-1.9 qt/A	Most small-seeded annual grasses and broadleaf weeds.	Apply before weeds exceed the two-leaf stage and corn exceeds 5 inches. 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.
bentazon @ 0.75-1.0 lb/A	Basagran @ 1.5-2 pt/A; Mix with COC in some situations; consult label.	Many broadleaf weeds, including annual morningglory, cocklebur, velvetleaf, Pennsylvania smartweed, prickly sida, dayflower, ragweed and yellow nutsedge. No grass control.	Apply to small, actively growing weeds. Two applications of five to 14 days apart may be necessary to control morningglories at the four-leaf and 4-inch-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	Sandea 75 DF, Profine 75 DF Sempra 75 DF @ 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 seven days after application. Consult label for plant back restrictions. No more than two applications per season. Do not apply to crops under stress. Check label for weed stage development. Do not harvest within 30 days of application.

Cucurbits (Cucumber, Squash, Watermelon, Pumpkin, Cantaloupe): Table 1. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
ethalfluralin @ 1.13-1.7 lbs/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 five days with a 1/2 inch of rainfall or irrigation.
halosulfuron @ 0.024-0.36 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-0.75 oz/A	Nutsedge and some broadleaf weeds.	Cucumbers and cantaloupe only. Apply after planting before weeds and crop emerge. Also can be applied seven days prior to transplanting. May be applied as an under-plastic mulch. Apply following final bed shaping and just prior to laying plastic. Wait seven days after application to plant.
ethalfluralin @ 0.4-1.2 lbs/A + clomazone @ 0.125-0.325 lb/A	Strategy 2.1L @ 2.6 pt/A	Annual grasses and broadleaf weeds.	Apply after seeding. Do not apply prior to planting. Do not incorporate. May be applied 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. Don't use on jack-o'-lantern or squash.
terbacil @ 0.1-0.2 lb/A	Sinbar 80 WP @ 2-4 oz/A	Broadleaf weeds.	For use on watermelons only. 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.

Cucurbits (Cucumber, Squash, Watermelon, Pumpkin, Cantaloupe): Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Arrow @ 6-8 oz/A; Apply with COC @ 1 gal/100 gal Pump up sprayer: 0.33-0.66 oz/gal clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	May also be applied to musk melons. Apply before grasses exceed recommend height; consult label. Do not apply under stressed conditions. Rainfast in one hour. May be applied a minimum of 30 days before harvest. Don't apply more than 8 oz/A/application. Allow 14 days between applications.
halosulfuron @ 0.024-0.36 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-0.75 oz/A; Apply with NIS @ 1 qt/100 gal of water	Yellow and purple nutsedge and some broadleaf weeds.	Cucumbers and cantaloupe only. Overtop application 14 days after transplanting. Avoid overtop application when temperature or humidity are high. Can be applied as a direct spray to row middles. Thirty days to harvest cucumbers; 57 days to harvest cantaloupes. See label for crop rotation intervals. DO NOT apply more than 2 oz/A in a 12-month period.
sethoxydim @ 0.09-0.28 lb/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 musk melons. Apply before grasses exceed recommend height; consult label. Adjust pressure (40-60 psi), spray volume (5-20 GPA) 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 one hour. Do not apply to grasses under stress.

Cucurbits (Cucumber, Squash, Watermelon, Pumpkin, Cantaloupe): Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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. Also, may 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 a @ 0.12-0.18 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-1.0 oz/A	Nutsedge and some broadleaf weeds.	Apply to row middles. For use in watermelons, pumpkins or squash only.
trifluralin @ 0.5-1 lb/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 lbs/A on medium soil; 1.6 lbs/A on heavy soil	Preemergence control only. Small-seeded grasses, broadleaf weeds and seedling johnsongrass.	For use only on cucumbers, watermelons and cantaloupes. Direct spray to row middles and/or beneath plants at the three- to four-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 watermelons within 60 days. Do not apply over the top of plants.
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass killing herbicides.	Do not use on squash. Apply postemergence as a directed spray using hoods. Spray will injure crop. Most effective when weeds are less than 4 inches tall. Good coverage equals good weed control. Can be mixed with other herbicides to control grasses.
ethalfluralin @ 0.4-1.2 lb/A + clomazone @ 0.125-0.325 lb/A	Strategy @ 2.1 L 2-3 pt/A	Annual grasses and broadleaf weeds.	Cucumbers, cantaloupes pumpkins watermelons, squash. May be applied post-directed spray to row middles after crop emergence or transplanting. Do not apply over plants. Preemergence activity on weeds only.

Eggplant: Table 1. Preplant and pre-transplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
napropamide @ 1-2 lbs/A	Devrinol 50DF @ 2 lbs/A on light soil; 3 lbs/A on medium soil; 4 lbs/A on heavy soil	Certain annual grasses and broadleaves,	Apply before transplanting; can only be used on transplants. Incorporate 1- to 2-inches deep soon after application. Spray soil strip between rows of plastic after laying the mulch.
trifluralin ¹ @ 0.5-1 lb/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 lbs/A on medium soil; 1.6 lbs/A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass	Incorporate thoroughly in the top 2 inches of soil just before transplanting. Avoid transplanting until temperatures have warmed in the spring. Eggplant tolerance may be marginal. Use with caution.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Eggplant: Table 2. Postemergence and post-transplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
sethoxydim @ 0.188-0.28 lb/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. Apply a minimum 20 days before harvest. Maximum use rate is 4.5 pt./A/yr. Rainfast in one hour. Poast plus COC may cause leaf burn.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Apply with COC @ 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 one hour. Allow 14 days between applications.

Eggplant: Table 3. Directed postemergence and Directed post-transplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 and grasses; top kill and suppression of perennials.	Apply after transplanting as a directed spray between rows. Use shields to protect crop. Use 20-100 GPA. Do not exceed 30 psi nozzle pressure or spray under conditions that favor drift. Apply when weeds and grasses are 1-6 inches high. Apply a minimum of 30 days to harvest. Do not exceed three applications per season. Do not feed or graze treated areas.
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 or shielded sprayer or a wiper applicator. Also, may be used postharvest. 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.
halosulfuron @ 0.12-0.18 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-1.0 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 recrop intervals. Do not apply more than 2 oz/A/year.
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Apply as directed spray using hoods. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Good coverage equals good weed control.

Greens (Collard, Mustard, Turnip): Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
napropamide @ 1-2 lbs/A	Devrinol 50DF @ 2 lbs/A on light soil; 3 lbs/A on medium soil; 4 lbs/A on heavy soil	Certain annual grasses and broadleaves.	Apply before transplanting; can only be used on transplants. Incorporate 1- to 2-inches deep soon after application. Spray soil strip between rows of plastic after laying the mulch.
trifluralin ¹ @ 0.5-1 lb/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 lbs/A on medium soil; 1.6 lbs/A on heavy soil	Small-seeded grasses, broadleaf weeds and seedling johnsongrass.	Incorporate thoroughly in the top 2 inches of soil just before transplanting. Avoid transplanting until temperatures have warmed in the spring. Eggplant tolerance may be marginal. Use with caution.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Greens (Collard, Mustard, Turnip): Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
sethoxydim @ 0.09-0.28 lb/A	Poast @ 0.5-1.5; Apply with COC @ 2 pt/A; Pump up sprayer: 1.3-2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses.	Do not use on turnips. Apply to actively growing grasses before they exceed recommended heights. Adjust equipment to ensure good coverage. 20 days before harvest. Maximum use rate is 4.5 pt/A/yr. Rainfast in 1 hour. 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, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Arrow @ 6-8 oz/A; Apply with COC @ 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal clethodim+1.3 oz/gal COC	Annual and perennial grasses.	Apply to actively growing grasses before they exceed recommended heights; consult label. Do not apply within 14 days of harvesting leaves or 30 days of harvesting the root. Maximum use rate is 8 oz/A/application. Rainfast in one hour.
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. Apply at least 30 days before harvest for mustard, collards, turnips roots, kale and 15 days before harvest for turnip tops. Mustard green injury has been observed in some trials.

Greens (Collard, Mustard, Turnip): Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Direct application using a hooded sprayer. Spray will injure crop. Most effective when weeds are less than 4 inches 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.	Not labeled for turnip. Apply to row middles only using a hooded or shielded sprayer or a wiper applicator. Also, may 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.

Garlic: Table 1. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 two days of planting for preemergence control. See postemergence section of product label for additional comments.
pendimethalin @ 0.5-1.5 lbs/A	Prowl 3.3, Pendimax 3.3 @ 1.2-1.8 pt/A on light soil; 1.8-2.4 pt/A on med. soil; 1.8-3.6 pt/A on heavy soil; Prowl H2O @ 1-1.6 pt/A on light soil; 1.6-2.1 pt/A on med. soil; 2.1-3.2 pt/A on heavy soil; Pentagon DG @ 0.5-1.25 lbs/A on light soil; 1.25-1.7 lbs/A on med. soil; 1.25-2.5 lbs/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 seven 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 three days after planting. Apply prior to garlic and weed emergence. Do not apply more than 6 oz/A/growing season.

Garlic: Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
bromoxynil @ 0.375-0.5	Buctril 2EC, Moxy 2EC @ 1.5-2 pt/A; Buctril 4EC @ 0.75-1 pt/A	Many broadleaf weeds.	Apply when garlic has one- to two-true-leaf stage and less than 12 inches tall and weeds are 1-4 inches tall. Use a minimum spray volume of 20 gal/A. Do not apply within 112 days of harvest. Do not add surfactants. Use lower rate on small weeds and the higher rate on 4 inches weeds. Do not apply more than 0.5 lb ai/A/season.
fluzafop @ 0.1-0.375 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; 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 GPA) 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/A of Fusilade DX per acre per season. Do not apply to grasses that are drought-stressed. Do not apply if rainfall is expected within one hour.
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 two-true-leaf stage until a minimum of 30 days till harvest. Application made prior to the two-true-leaf stage may result in significant crop injury including possible stand reduction.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim 2EC, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC @ 1 gal/100 gal; Pump up sprayer: 0.33-0.66 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 one hour. May be applied a minimum of 45 days before harvest. Do not apply more than 0.5 lb. ai/A/year. Apply in a minimum of 20 GPA.
sethoxydim @ 0.1-0.3 lb/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 recommended heights. Adjust equipment to ensure good coverage 45 days before harvest. Maximum 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 two-true leaves and weeds are in the two- to four-true-leaf stage. Some garlic injury may result. Injury may be severe if applied under cool, wet conditions. Do not make more than four applications per 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 pt/A on light soil; 1.8-2.4 pt/A on med. soil; 1.8-3.6 pt/A on heavy soil; Prowl H2O @ 1-1.6 pt/A on light soil; 1.6-2.1 pt/A on med. soil; 2.1-3.2 pt/A on heavy soil; Pentagon DG @ 0.5-1.25 lbs/A on light soil; 1.25-1.7 lbs/A on med. soil; 1.25-2.5 lbs/A on heavy soil	Many small-seeded grasses and broadleaves, including annual spurge.	Apply to garlic with one to five leaves. Treatment most effective when rainfall or overhead irrigation is received within seven days after application. May be applied as split application both preemergence and postemergence. Garlic treated postemergence should not be harvested within 45 days after application.

Garlic: Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective on weeds less than 4 inches 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 using only a hooded or shielded sprayer or a wiper applicator. Also, may be used post-harvest. Avoid crop injury by keeping herbicide off foliage, green shoots, stems, exposed roots or fruit.

Leafy Vegetables (Lettuce, Endive, Escarole, Radicchio): Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
benefin @ 1.12-1.5 lbs/A	Balan DF @ 2.0 lbs/A on coarse-med soil; 2.5 lbs/A on fine soil	Annual grasses and broadleaf weeds.	Lettuce and endive: Incorporate into the top 2-3 inches 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.	Lettuce, endive and escarole: Necessary to move herbicides into the root zone of germinating weeds by overhead sprinkler irrigation or rainfall two to three days after application. Can be incorporated shallowly and thoroughly before planting. Check rotation restrictions. Make only one application/year.
bensulide @ 5-6 lbs/A	Prefar 4E @ 5-6 qt/A	Certain annual grasses and broadleaf weeds.	Lettuce: Incorporate 1-2 inches before planting.
trifluralin ¹ @ 0.5-0.75 lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1pt/A on light soil; 1.5 pt/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 and seedling johnsongrass.	Endive, escarole and radicchio: Incorporate thoroughly in top 2 inches 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.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Leafy Vegetables (Lettuce, Endive, Escarole, Radicchio): Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
bensulide @ 5-6 lbs/A	Prefar 4E @ 5-6 qt/A	Certain annual grasses and broadleaf weeds.	Lettuce: 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.	Lettuce, endive and escarole: See comments above

Leafy Vegetables (Lettuce, Endive, Escarole, Radicchio): Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim 2 EC, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC @ 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/A clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	For use on leaf lettuce: Apply to actively growing grasses. Do not apply more than 8 oz/A in a single application. Rainfast in one 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.	Head lettuce, endive and escarole: Do not apply to leaf lettuce post. Apply before or after thinning before weeds germinate. Move herbicide into the root zone by overhead irrigation or rainfall within two to three days. Check rotation restrictions. 55 days to harvest. Make one application per year.
sethoxydim @ 0.1-0.3 lb/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.	Lettuce: Apply to actively growing grasses before they exceed labeled heights; consult label. Do not 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 pt/A/year. Rainfast in one 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.	Lettuce and endive: 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.

Leafy Vegetables (Lettuce, Endive, Escarole, Radicchio): Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds. including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Lettuce: Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective on weeds less than 4 inches 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.	Lettuce: Apply to row middles using only a hooded or shielded sprayer or a wiper applicator. Also may be used post-harvest. Avoid injury by keeping herbicide off all plant parts. 14 days to harvest.

Irish Potato: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor @ 0.96-1.9 lbs/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 inches 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 preemergence application. Do not harvest within 60 days after application. Check label for tank-mixes with other herbicides. Planting and future cultural practices should not bring untreated soil to the surface.
metolachlor @ 0.96-1.9 lbs/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 inches 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 premerge application. Do not harvest within 60 days after application. Check label for tank-mixes with other herbicides. Planting and future cultural practices should not bring untreated soil to the surface.

Irish Potato: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
dimethenamid-P	Outlook 6EC @ 12-21 oz/A	Most annual grasses, broadleaf weeds, 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 -1.5 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 pt of NIS/100 gal. See label for tank-mixtures.
S-metolachlor @ 0.96-1.9 lbs/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 premerge if Dual was used preplant. Do not harvest within 60 after planting. Check label for tank-mixes with other herbicides. Planting and 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 lbs/A on heavy soil	Crabgrass, foxtail, seedling johnsongrass, fall panicum, broadleaf signalgrass, 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.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
linuron @ 0.75-2.0 lbs/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 inches tall and before broadleaf weeds are 6 inches tall. Plant seed at least 2 inches deep. Do not spray over top of emerged potatoes. If emerged weeds are present, add NIS @ 1 pt/25 gal. Best results are obtained when application is made to moist soil, followed within two weeks by 1-2 inches of rainfall. Check label for tank-mixes with other herbicides.
pendimethalin @ 0.75-1.5 lbs/A	Prowl/Pendimax 3.3EC @ 1.2 pt/A on coarse soil; 2.4 pt/A on medium soil; 3.6 pt/A on fine soil; Prowl H2O @ 1.0 pt/A on coarse soil; 2.0 pt/A on medium soil; 3.0 pt/A on fine soil; Pentagon DG @ 0.85-1.25 lbs/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; good control of some small-seeded broadleaves such as pigweed.	Apply after planting before crop or weeds emerge or after drag off. Most effective when rainfall is received within seven days of application. Incorporate 1-2 inches deep if it does not rain within seven 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.

Irish Potato: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	Apply to actively growing grasses. 30 days to harvest. Rainfast in one 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 pt/A on coarse soil; 2.4 pt/A on medium soil; 3.6 pt/A on fine soil; Prowl H2O @ 1.0 pt/A on coarse soil; 2.0 pt/A on medium soil; 3.0 pt/A on fine soil	Most annual grasses, seedling johnsongrass; good control of some small-seeded broadleaves such as pigweed; will not control emerged weeds.	Apply after crop emergence to 6-inch stage of growth. This treatment is most effective when adequate rainfall is received within seven 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.
sethoxydim @ 0.09-0.47 lb/A	Poast @ 0.5-2.5 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 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 pt/A in one season. Do not apply if rainfall is expected within one hour following application. Do not apply to grasses under stress.

Irish Potato: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 postharvest. 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 within 14 days of harvest.
S-metolachlor @ 0.96-1.4 lbs/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 pt/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.
metolachlor @ 0.96-1.4 lbs/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 @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Coverage is critical.

Irish Potato: Table 5. Harvest aid herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
endothall @ 0.75-1.0 lb/A	Des-I-Cate @ 1.5-2 gal/A; Desiccate 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 GPA) for heavy vine growth. Make a second application a minimum five days after first application where vine growth is dense. Do not exceed a total of 4 pt/A.

Okra: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
trifluralin ¹ @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin, and other 4 EC products @ 1pt/A on light soil; 1.5 pt/A on med; 2.0 pt/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 and seedling johnsongrass.	Incorporate thoroughly in top 2 inches of soil just before planting. Check label for rates of other formulations of trifluralin.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Okra: Table 2. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 postharvest. 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 @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grasskilling herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Coverage is critical.

Onion: Table 1. Preplant and pre-transplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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. Transplanting 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, postemergence applications can be made. Do not apply to direct-seeded onions.

Onion: Table 2. Preemergence and post-transplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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.	Transplant dry bulb only. Onions are most tolerant to this application immediately following or within two 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 @ 4.5-10.5 lbs/A	Dacthal 75 WP @ 6-8 lbs/A on light soil; 8-10 lbs/A on medium soil; 10-14 lbs/A on heavy soil	Annual grasses and certain broadleaf weeds.	Dry bulb onions direct-seed or transplant. Apply in at least 20 GPAA. A minimum of 1/3-1/2 inch of water is necessary to activate within three to five days of application. Do not incorporate.

Onion: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
fluzazifop @ 0.1-0.375 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.	Dry bulb onions. Apply to actively growing grasses before they exceed the recommended growth stages; consult label. 45 days to harvest. Use sufficient spray volume (5-40 GPA) and pressure (40-60 psi) to ensure complete coverage. Do not apply more than 48 oz./A/season. Rainfast in one hour.
bromoxynil @ 0.25-0.375 lb/A	Buctril, Moxy 2EC @ 1-1.5 pt/A; Buctril 4EC @ 0.5-0.75 pt/A	Many broadleaf weeds.	Dry bulb onions. Apply to onions with two to five true leaves. Water volume is important; use 50-70 GPA. Soil and onion foliage should be dry at time of application, humidity should be low and dew should be dried. Do not treat if thrip 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.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
dimethenamid-p @ 0.6-1.0 lb/A	Outlook 6 EC @ 12-24 oz/A	Most annual grasses and some broadleaf weeds.	Dry bulb onions. Apply after onions have two 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.
sulfuric acid	Battery Acid @ 3-5% solution of actual sulfuric acid	Emerged small broadleaf weeds and some grasses.	Dry bulb onions. Apply after onions have reached the two- to four-leaf stage and weeds are in the two- to four-leaf stage. For best results apply on bright, sunny and warm days. Apply in 40-60 gal. of water for through coverage. Pour acid into water, never water into acid. 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 two to three fully developed true leaves and when weeds are in the two- to four-leaf stage or two 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 gal 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, Intensity, Clethodim, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 1.3 oz/gal COC	Annual and perennial grasses and bluegrass.	Dry bulb onions. Apply to actively growing grasses. Rates vary by grass species, stage and region; consult label. Rainfast in one hour. Apply a minimum of 45 days before harvest. Maximum use rate is 0.5 lb ai/A/year. 20 GPA minimum volume.
sethoxydim @ 0.1-0.3 lb/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.	Green and dry bulb onions. 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. Do not apply within 30 days of harvest. Do not apply more than 4.5 pt/A/season. Rainfast in one 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 pt/A on coarse soil; 2.4 pt/A on medium soil; 3.6 pt/A on fine soil; Prowl H2O @ 1.0 pt/A on coarse soil; 2.0 pt/A on medium soil; 3.0 pt/A on fine soil	Many small-seeded grasses and broadleaves.	Dry bulb onions direct seed or transplant. Apply between the two- to nine-true-leaf stage. Do not apply within 45 days of harvest. Treatments are most effective when not more than 0.5 inch of rainfall or overhead irrigation is received within seven days after application. Heavy rains after application can cause crop injury.

Onion: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 postharvest. 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 @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches 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.	Dry bulb onions direct-seed or transplant. Apply to row middles with shields. Incorporate within one day of application. Rate varies by soil type. Avoid contacting roots, bulbs or foliage with spray.

Peppers: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
trifluralin ¹ @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1 pt/A on light soil; 1.5 pt/A on med; 2.0 pt/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 and seedling johnsongrass.	Bell and hot pepper transplants only: Incorporate thoroughly in top 2 inches of soil just before transplanting.
oxyfluorfen @ 0.5-1.0 lb/A	Goal @ 1-2 pt/A	Broadleaf weeds, some grasses, geranium and cutleaf evening-primrose.	Bell and hot pepper transplants only; Plastic culture only: 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 pt/A on fine soil	Many small-seeded grasses and broadleaves.	Apply before transplanting, but not under plastic. Do not apply before direct seeding hot peppers. Incorporation is beneficial when rainfall does not occur to activate.
napropamide ¹ @ 1-2 lb/A	Devrinol 50DF @ 2 lbs/A on light soil; 4 lbs/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.	Hot pepper only: 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 pt/A	Most annual grasses and some small-seeded broadleaf weeds.	Bell and hot pepper (except banana): 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.	Special local need label; Bell and non-bell peppers excluding Tabasco: Apply broadcast preplant nonincorporated prior to transplanting. No activity on existing weeds. Apply to weed-free prepared area prior to weed emergence.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Peppers: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
halosulfuron @ 0.024-0.048 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-1 oz/A; Apply with NIS @ 1 qt/100 gal	Nutsedge and some broadleaf weeds.	Bell and hot pepper transplants only: Apply to row middles between plastic only. Don't allow herbicide to contact the crop or plastic. Early season application will give post and preemergence control. Do not apply more than 2 oz/A in a 12-month period. Check label for recrop intervals.

Peppers: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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.	Special local need label for Louisiana; Labeled for bell and non-bell peppers excluding Tabasco: Apply broadcast within 48 hours after transplanting. No activity on existing weeds. Apply to weed-free prepared area prior to weed emergence.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	Bell and hot pepper transplants only: Apply to actively growing grasses. Rainfast in one hour. Apply a minimum of 20 days before harvest. 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.	Not labeled on bell peppers; special local need label for Louisiana: 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 GPA) and pressure (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 and minimum of 20 GPA. Best coverage is obtained when two nozzles are used, one directed to each side of the row.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
halosulfuron @ 0.024-0.048 lb/A	Sandea 75 DF or Profine 75 DF @ 0.5-1 oz/A + NIS at 1 qt/100 gals.	Nutsedge and some broadleaf weeds.	Bell and hot pepper transplants only: Apply to row middles between plastic only. Don't allow herbicide to contact the crop or plastic. Early season application will give post and preemergence 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.
sethoxydim @ 0.1-0.3 lb/A	Poast @ 0.5-1.5 pt/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.	Bell and hot pepper transplants only: Apply to actively growing grasses before they exceed recommended heights. Adjust pressure (40-60 psi), spray volume (5-20 GPA) and height of spray boom to ensure thorough coverage. Apply at least 20 days before harvest. Do not apply more than 4 1/2 pt./A/season. Crop oil should be used with caution because of potential leaf injury when temperature exceeds 90 degrees and the relative humidity is 60% or higher, or anytime the temperature exceeds 100 degrees. Rainfast in 1 hour.

Peppers: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor @ 1.23-2.48 lbs/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.	Special local need label; postemergence directed spray at layby in Tabasco peppers only: Do not 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 pt/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.	Bell and hot pepper transplants only: Apply to row middles using shields or hooded sprayers. Apply when weeds are 1-6 inches high. 30 days to harvest. Use 20-100 gal water/A. Do not exceed 30 PSI if prone to drift. Do not apply more than three times per season. Do not feed or allow animals to graze treated areas.
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Bell and hot pepper transplants only: 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 is essential for good weed 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.	Bell and hot pepper transplants only: Apply to row middles only with a hooded sprayer, shielded sprayer or a wiper applicator. Can be used post-harvest. Severe injury will occur if herbicide contacts foliage, green shoots, stems, exposed roots or fruit. Do not apply within 14 days of harvest.

Shallot (Dry Bulbs): Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
bensulide @ 5-6 lbs/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 inches before planting.

Shallot (Dry Bulbs): Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
bensulide @ 5-6 lbs/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.

Shallot (Dry Bulbs): Table 3. Postemergence herbicides.

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 pt/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 4.5 pt/A/season. Use with caution because of potential leaf injury when temperature exceeds 90 F and the RH is >60% or anytime the temperature exceeds 100 F. Rainfast in one hour. 30 days to harvest.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim 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 one hour. Do not apply more than 0.5 lb ai/A/season. Apply a minimum of 45 days before harvest. Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 two-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 pt/A on coarse soil; 2.4 pt/A on medium soil; 3.6 pt/A on fine soil; Prowl H2O @ 1.0 pt/A on coarse soil; 2.0 pt/A on medium soil; 3.0 pt/A on fine soil	Many small-seeded grasses and broadleaves.	Apply after crop reaches two- to nine-leaf stage. Do not apply within 45 days of harvest. Most effective when rainfall or overhead irrigation is received within seven days.

Shallot (Dry Bulbs): Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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.

Southern Pea: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor ¹ @ 1.0-2.0 lbs/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 ¹ @ 1-2 lbs/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 lbs/A	Prowl 3.3 EC @ 1.2-1.8 lbs/A on coarse soil; 1.8-2.4 lbs/A on medium soil; 1.8-3.6 lbs/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 inches 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 lb/A	Pursuit 2 EC @ 4 oz/A; Pursuit 70 DG @ 1.5 oz/A	Several broadleaf weeds; 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. Observe plant back interval for other crops.
trifluralin ¹ @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1pt/A on light soil; 1.5 pt/A on med; 2.0 pt/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 and seedling johnsongrass.	Incorporate thoroughly in top 2 inches 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.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Southern Pea: Table 2. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
S-metolachlor @ 1.0-2.0 lbs/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.
metolachlor @ 1.0-2.0 lbs/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 lb/A	Pursuit 2 EC @ 4 oz/A; Pursuit 70 DG @ 1.5 oz/A	Several broadleaf weeds; reduces competition from morningglories.	Apply after planting, before crop and weeds emerge. May cause crop injury. Use of Pursuit is at the user's and/or grower's risk. The use of trifluralin prior to Pursuit may cause crop damage. Do not exceed one Pursuit application per year. Pursuit must be applied at least 30 days before harvest. Observe plant back interval for other crops.

Southern Pea: Table 3. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 likely hood of crop injury at high temperatures. Do not apply on unusually hot and humid days. Apply at least 30 days before 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 three 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 lb/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; reduces competition from morningglories.	Apply when peas are at least 3 inches tall, but before five nodes and flowering. Apply when weeds are 1-3 inches tall or have one to four leaves. May cause crop injury; applicator and/or grower assumes the risk. The use of trifluralin prior to Pursuit may cause crop damage. Do not exceed one Pursuit application per year. Pursuit must be applied at least 30 days before harvest. Check label for maximum number of leaves at which weeds should be sprayed postemergence.
sethoxydim @ 0.1-0.3 lb/A	Poast @ 0.5-1.5 pt/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 to small, actively growing grasses; consult label for application timing. Do not apply on days that are hot and humid. Do not apply within 15 days of harvest.

Southern Pea: Table 4. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Directed applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Good coverage equals good weed control.
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.

Spinach: Table 1. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
cycloate @ 3 lbs/A	RoNeet 6EC @ 2 qt/A	Annual grasses and broadleaves.	Incorporate 2-3 inches before planting.

Spinach: Table 2. Postemergence herbicides.

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 pt/A; Apply with COC @ 2 pt/A; Pump up sprayer: 2 oz/gal Poast + 1.3 oz/gal COC	Annual and perennial grasses. Does not control annual bluegrass.	Apply actively growing grasses before they exceed labeled heights; consult label. Adjust pressure (40-60 psi), volume (5-20 GPA) 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 one hour. Apply at least 15 days before harvest.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim, Arrow @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 one hour. Do not apply more than 0.50 lbs ai/A/year. Adding COC increases chances of crop injury, especially at high temperatures.
clopyralid @ 0.125-0.187 lb/A	Stinger 3 EC @ 0.66-0.5 pt/A	Broadleaf weeds.	Apply to spinach in the two- to five-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 pt/A; Split rate: 2.5-3 pt/A followed by 2.5-3 pt/A	Select, Arrow, Intensity, Clethodim broadleaf weeds.	Apply to actively growing weeds in 11-22 GPA of water when weeds are at the two-leaf stage and spinach is past the four- to six-true-leaf stage. Split rate: apply at two-leaf stage of spinach, repeat four to six days later with 3 pt/A. May cause injury if the crop is under stress. Use when temperatures are below 75 F, 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. Apply at least 40 days before harvest.

Spinach: Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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. 14 days to harvest.
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Directed applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Good coverage equals good weed control.

Sweet Potato: Table 1. Preplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
flumioxazin @ 0.063-0.079 lb/A	Valor SX @ 2-2.5 oz/A	Smellmellon, prickly sida, copperleaf, pigweeds. May suppress annual sedges.	Apply before transplanting to a clean seed bed. Do not apply post-transplant as foliar burn will occur.
fomesafen @ 0.25 lb/A	Reflex @ 1 pt/A	Carpetweed, groundcherry, purslane, morningglory. Fair to good suppression of smellmellon, pigweed and yellow nutsedge.	Apply before transplanting to a clean seed bed. Do not apply post-transplant as foliar burn will occur.
bicyclopyrone @ 0.034-0.046 lb/A	Optogen @ 2.6-3.5 oz/A	Carpetweed, groundcherry, purslane, morningglory. Fair to good suppression of pigweed and annual grasses.	Apply before transplanting or to row middles after planting avoiding any contact with sweet potato plant.

Sweet Potato: Table 2. Post-transplant herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
clomazone @ 0.5-1.0 lb/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 recrop intervals.
S-metolachlor @ 1.0-2.0 lbs/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. Do not 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 1/2 inch of water following a Dual Magnum application.
fluazifop @ 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 GPA) and pressure (40-60 psi) to ensure complete coverage. Apply at least 55 days before harvest. Maximum season use rate is 48 oz/A.
sethoxydim @ 0.1-0.3 lb/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 actively growing grasses before they exceed labeled heights; consult label. Adjust pressure (40-60 psi), volume (5-20 GPA) 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 degrees and the relative humidity is 60% or higher or anytime the temperature exceeds 100 degrees. Rainfast in 1 hour. Apply at least 30 days before harvest.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6 - 8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33 to 0.66 oz/gal Select, Arrow, Intensity, Clethodim + 1.3 oz/gal COC	Annual and perennial grasses.	Apply to actively growing grasses. Rates vary by grass species and stage; consult label. Rainfast in one hour. Apply at least 30 days before harvest.

Tomato: Table 1. Preplant and preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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, 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 lb/A	Sandea 75 DF or Profine 75 DF @ 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 seven days. Use the 1 oz/A rate for row middles. Do not make more than 2 applications. Do not apply 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 preplant incorporate; apply dosage in 10-40 GPA as a broadcast spray to the soil surface immediately before transplanting. Incorporate 2-4 inches deep with equipment mixing the chemical into the soil. Check label for tank-mixes.
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; 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 lbs/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 pt/A	Broadleaf weeds, some grasses, Carolina geranium, cutleaf evening-primrose.	Plastic culture only: 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.
trifluralin ¹ @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1pt/A on light soil; 1.5 pt/A on med; 2.0 pt/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 and seedling johnsongrass.	Incorporate thoroughly into top 2 inches of soil just before planting. Check label for tank-mixes with other herbicides.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.

Tomato: Table 2. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
rimisulfuron @ 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 two true leaves. Weeds should be no more than 1 inch tall and actively growing. Do not apply within 45 days of harvest. See label for further instructions.
sethoxydim @ 0.1-0.3 lb/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 pressure (40-60 psi), volume (5-20 GPA) 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 one hour. Apply at least 20 days before harvest.
halosulfuron @ 0.024-0.048 lb/A	Sandea 75 DF or Profine 75 DF @ 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 four-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. Do not make more than two applications. Do not use more than 2 oz/A/12 months. Apply at least 30 days before harvest.
clethodim @ 0.1-0.125 lb/A	Select, Arrow, Intensity, Clethodim @ 6-8 oz/A; Select, Arrow, Intensity, Clethodim Max @ 9-16 oz/A; Apply with COC at 1 gal/100 gal; Pump up sprayer: 0.33-0.66 oz/gal Select, Arrow, Intensity, Clethodim + 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 one hour. Apply at least 20 days before 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.	Do not use on seeded crops before the five- to six-leaf stage. Do not use on transplants until they have recovered and new growth is evident. Apply in 20 or more gal. of water. Allow 14 days between applications to avoid severe injury. Do not apply within 24 hours or mix with other pesticides. Do not use more than 1.33 lbs/A/season or apply 1.33 lbs/A within a 35-day period unless a portion of that is directed. Do not use hot caps within seven days of application or anytime afterwards. Do not apply within three days of cool, wet or cloudy weather. Apply at least seven days before harvest.

Tomato: Table 3. Directed postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Direct applications using hooded sprayers. Injury will occur if crop is sprayed. Most effective when weeds are less than 4 inches tall. Coverage is critical.
S-metolachlor @ 0.95-1.58 lb/A	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 GPA of water. Apply at least 90 days before 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 inches high. 30 days to harvest. Use 20-100 GPA. Do not exceed 30 psi nozzle pressure or spray under conditions that may cause excessive drift. Don't apply more than three times per season. Do not feed or graze treated areas.
metribuzin @ 0.5-1 lb/A	Sencor 4L @ 1-2 pt/A 4L; Sencor DF, Metribuzin DF @ 0.66-1.33 lbs/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. See "Postemergence" section for precautions.
trifluralin ¹ @ 0.5-1.0 lb/A	Treflan HFP, Trifluralin, Trilin and other 4 EC products @ 1pt/A on light soil; 1.5 pt/A on med; 2.0 pt/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 and seedling johnsongrass.	Apply as a directed spray between rows and beneath plant and incorporate. Check label for tank-mixes with other herbicides.
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.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
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 minimum of 20 GPA 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. 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.
oxyfluorfen @ 0.5-1.0 lb/A	Goal @ 1-2 pt/A	Broadleaf weeds, some grasses, geranium, 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 inch of rainfall. Consult label for planting intervals. Beds must be worked at least 2 inches deep before planting.
carfentrazone-ethyl @ 0.012-0.031 lb/A	Aim 2EC @ 2 oz/A; Mix with NIS @ 2 pt/100 gal or COC @ 1 gal/100 gal	Most emerged broadleaf weeds, including morningglory; some suppression of newly emerged annual grass. Can be mixed with grass-killing herbicides.	Apply before planting. Can be used on all vegetable crops. Most effective when weeds are less than 4 inches tall. Good coverage equals good weed control. Can be mixed with other burndown materials.

¹Better results have been obtained with incorporated herbicides when chemicals are applied broadcast and incorporated at the correct depth. The row should then be pulled up and planted.