

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
FRUIT AND NUT CROPS				
Tree Fruits				
Preemergence				
oryzalin @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	Surflan 4 AS 2 to 4 qt/A. Use low rate for short term (4 months) weed control and high rate for 6- to 8-month weed control. May be tank mixed with Karmex or Princep. See comment at right.	Apply to weed-free soil. Mix any weed residue or trash thoroughly into soil before application.	Sprayer must have thorough agitation and avoid spray drift to foliage. For broader spectrum of control, Surflan may be tank mixed with Karmex or Princep as recommended individually. See label for details. May be used on apples, peaches, pears and most other tree fruits.
diuron @ 2 to 3.2 lb/A	Annual weeds and some perennials.	Karmex 80 DF 2.5 to 4 lb/A.	Apply February through May or in fall after harvest.	Time period that trees should be established in the orchard before using Karmex: apples 1 year, peaches 3 years, pears 1 year.
norflurazon @ 2 to 4 lb/A	Annual weeds and some perennials.	Solicam 80 DF 2.5 to 5 lb/A.	From fall to early spring before weeds emerge.	Orchard floor should be free of weeds. Use only on trees 18 months or older. May be applied to apples, cherries, pears, nectarines, peaches and plums.
terbacil @ 1.6 to 3.2 or 0.8 to 1.6 lb/A	Annual weeds and some perennials.	Sinbar 80W 1 to 2 lb.	From fall to early spring before weeds emerge.	Time period that trees should be established in the orchard before using Sinbar: apples 3 years, peaches 3 years.
simazine @ 2 to 4 lb/A	Annual weeds, primarily broad-leaves.	Princep 2 to 4 qt of 4L. 2.2 to 4.4 lb 90WDG.	From fall to early spring before weeds emerge.	Time period that trees should be established in the orchard before using Princep: apples, peaches, plums, nectarines, cherries, pears 1 year.
flumioxazin @ 0.19 to 0.38 lb/A	Annual broadleaf and grass weeds.	Chateau 6 to 12 oz/A.	Preemergence, dormant applications preferred or use shielded sprayer.	For trees established less than three years growing in soil with a sand plus gravel content of over 80 percent, use a maximum rate of 6 ounces per acre. Do not harvest fruit from treated trees within one year of application.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
Postemergence				
paraquat @ 0.25 to 0.5 lb/A	Annual weeds and foliage of perennials.	Gramoxone Inteon 1 to 2 pt/A.	Apply in spring with preemergence herbicide. If needed, repeat alone throughout the season as required to contain weeds.	For paraquat: apply directly to weed foliage. May be used with preemergence material to eliminate existing weeds or 6 to 8 weeks later to eliminate escape weed plants. May be used in apples, cherries, peaches, nectarines, pears, plums, prunes and apricots.
fluazifop-P @ 0.19 lb/A	Annual and perennial grasses, including johnsongrass and bermudagrass.	Fusilade DX 2 EC 1.5 pt/A.	When grasses are actively growing. See label for growth stages. Repeat applications needed for bermudagrass and johnsongrass.	Do not use on bearing apples or pears. Do not harvest apricots, cherries, nectarines, peaches, plums or prunes within 14 days of application.
sethoxydim @ 0.3 to 0.5 lb/A	Annual and perennial grasses.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Apply to small annual grasses preferably within 14 days after emergence. See label for timing for perennial grasses.	Labeled for apple, crabapple, pear and quince. Do not harvest within 14 days of treatment. Add 1% crop oil concentrate.
2,4-D @ 1.5 lb/A	Broadleaf weeds.	Hi-Dep 1.5 qt/A.	Apply only after irrigation and allow maximum time before the next irrigation.	Do not apply around fruit trees or vines with hand gun. Use only flat, fan-type nozzles and low pressures – 20 to 30 lb. Use a fixed boom applicator which can be calibrated and which will deposit the spray uniformly. Avoid contact with fruit, foliage, stems or lower limbs of trees or vines. DO NOT spray bare ground. Apply precisely and uniformly to prevent damage to the trees or vines and to obtain satisfactory weed control. Do not apply during windy periods or extremely high temperatures. Do not harvest stone fruits within 40 days of application. Do not graze or feed cover crops from treated orchards to livestock.
glyphosate @ 0.75 to 3.75 lb/A	Annual weeds, johnsongrass and bermudagrass.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 1 to 5 qt in 10 to 20 gal water.	To actively growing vegetation.	Apply to peach orchards that have been planted for 2 years or more. Application must be made with a shielded boom sprayer or wiper applicator which prevents any contact of Roundup with the peach foliage or bark. Remove suckers and hangers at least 10 days before application. Misapplication of Roundup around peach trees can result in severe tree injury or death. Use 20 gpa or less of clean water.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
FRUIT AND NUT CROPS [cont.]				
Blueberries, Blackberries, Raspberries				
simazine @ 2 to 4 lb/A	Annual broadleaf and grass weeds.	Princep 4L 2.2 to 4.4 lb/A of 90 WDG. 2 to 4 qt/A of 4L.	In spring before bud break and in fall after harvest.	Do not apply more than 1 lb/ac/ai simazine on newly planted blackberries and raspberries.
dichlobenil @ 4 to 6 lb/A	Annuals and many perennials.	Casoron 4G 100 to 150 lb/A.	In early winter and not later than mid-February.	Low rate only for blackberries and raspberries. Apply only to plants established one year or more.
terbacil @ 0.4 to 1.6	Some perennials.	Sinbar 80W 0.5 to 2 lb/A.	In spring or after harvest in fall.	Apply only to plants established one year or more. Do not use in sandy soils with less than 3% organic matter.
paraquat @ 0.25 to 0.5 lb/A	Contact kill of green foliage.	Gramoxone Inteon 1 to 2 pt/A.	Before new canes emerge.	Apply as a directed spray in 50 to 200 gal spray mix to weeds before new canes emerge. Avoid paraquat contact with new canes, as injury will occur. Direct spray with low pressure to produce a coarse spray. Add a non-ionic surfactant at a rate of 16 to 32 oz/100 gal of spray mix, or 1 gal approved crop oil concentrate per 100 gal spray mix.
glyphosate @ 1 to 5	Most annual broadleaf and grass weeds and most perennial weeds.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 1 to 5 qt/A.	Apply as preplant or directed spray.	DO NOT SPRAY GREEN CANES, BARK, OR FOLIAGE. Apply preplant or as a directed spray to base of established plants. Do not apply within 14 days of harvest. Wiper applications may also be used. See label for specific rates.
glufosinate @ 0.75 to 1.5 lb/A	Most annuals and a few perennials.	Rely 1 SL 3 to 5 qt/A.	Postemergence.	For blueberries only. Apply as a directed application in a minimum of 10 gallons of water per acre. Do not allow spray to contact blueberries. Contact with green bark may cause injury. Do not apply within 14 days of harvest.
oryzalin @ 2 to 4	Annual grasses and small seeded broadleaf weeds.	Surflan 4 AS 2 to 4 qt/A.	Do not apply while fruit is present.	Do not apply when fruit is present. This treatment may be used on first year plants. Do not apply Surflan to lowbush blueberries.
norflurazon @ 2 to 4	Annual grasses and small seeded broadleaf weeds and some seedling perennials.	Solicam 80 DF 2.5 to 5 lb/A.	Early spring while plants are dormant.	Apply as a directed spray from fall to early spring when the plants are dormant and before weeds emerge. Make only one application per year. May be used on newly planted crops; however, on newly planted blackberries and raspberries, use only the lowest labeled rate. Application of SOLICAM may result in temporary bleaching or chlorosis of the leaves from which the plant will recover.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
hexazinone @ 1 to 2 lb/A	Most annual broadleaf and grass weeds and many perennials.	Velpar L 0.5 to 1 gal/A.	In late winter or early spring before blueberry leaf emergence.	For blueberries only. Apply as a directed spray to soil and weeds before blueberry leaf emergence. Apply at least 90 days before harvest. Do not use on first year plantings. Use lower rates on poorly drained or sandy soils. Before widespread use, trial use on a few plants is a good idea.
diuron @ 1.2 to 1.6 lb/A	Annual broadleaf and grass weeds.	Karmex 80DF 1.5 to 2.0 lb/A.	Preemergence or early post-emergence.	For blueberries only. Use only in fields that have been established for one year. Apply as a band treatment at base of the bushes. Add surfactant for improved control. Use caution on sandy, gravelly soils with low organic matter.
napropamide @ 4	Annual grasses and small seeded broadleaf weeds.	Devrinol 50 DF 8 lb/A.	Early spring or after harvest.	Apply to weed-free soil surface either in the spring or anytime after harvest. Enough irrigation or rainfall to wet the soil to a depth of 4 in. is necessary within 1 week of application. Apply as a directed spray to the base of the plants. May be used on first-year plantings. NOTE: Use only half this rate the first year if root pieces are planted.
fluazifop @ 0.25 to 0.38	Annual and perennial grasses.	Fusilade DX 2 EC 16 to 24 oz/A.		NON-BEARING ONLY. Check label for specific rates and timings. Do not apply within 1 year of the first harvest. Use of a crop oil or surfactant will be necessary.
sethoxydim @ 0.3 to 0.5	Annual and perennial grasses.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Postemergence to grasses.	Check label for specific rates and timings. Use a crop oil at a rate of 1 qt per acre. Do not apply within 1 year of the first harvest. NON-BEARING ONLY. May be used on bearing blueberries or raspberries but not within 30 or 45 days, respectively, of harvest.
clethodim @ 0.09 to 0.25 lb/A	Annual and perennial grasses.	Select 2 EC 6 to 16 oz/A.	Postemergence to grasses.	Use on nonbearing crop only. Do not apply within one year of harvest. Effective for annual bluegrass control.
Grapes				
Preemergence				
diuron @ 2 lb or 1 lb/A	Annual weeds and some perennials.	Karmex 80 DF 2.5 lb (1.25 lb after second year).	Early spring before weeds emerge.	Apply in 4-ft band centered under the trellis to soil free of trash and weeds. Do not use on 1 and 2 year old plantings. May be tank mixed with Sinbar or Surflan.
simazine @ 1 to 2 lb/A	Annual grasses and broadleaf weeds.	Princep 1 to 2 qt/A 4L. 1.1 to 2.2 lb 90WDG.	Early spring before weeds emerge.	Vineyard must be at least 3 years old. May be tank mixed with Surflan, Gramoxone or Roundup.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
FRUIT AND NUT CROPS				
Grapes – Preemergence [cont.]				
oryzalin @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	Surflan 4 AS 2 to 4 qt/A. Use low rate for short term (4 months) weed control and high rate for 6 to 8 months weed control.	Apply to weed-free soil. Mix any weed residues or trash thoroughly into soil before application.	Sprayer must have thorough agitation and avoid spray drift to foliage. See label for further details. Surflan may be tank mixed with Karmex or Princep as recommended individually to broaden spectrum of control. See label for details.
norflurazon @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	Solicam 80 DF 2.5 to 5 lb/A. Use low rate on light soils.	Fall to early spring. Do not apply to sandy loam soils after bud break.	Do not use on sandy or gravelly soils. Vines must be established for 2 years. Do not use on nursery stock.
flumioxazin @ 0.19 to 0.38 lb/A	Annual broadleaf and grass weeds.	Chateau 6 to 12 oz/A.	Preemergence, dormant applications preferred or use shielded sprayer.	Apply as a directed spray to dormant vines or use a shielded sprayer. Do not apply to vines established less than 2 years unless they are protected from spray contact by non-porous wraps, grow tubes or waxed containers. Combine with a labeled postemergence herbicide for control of emerged weeds.
isoxaben @ 0.5 to 1.0 lb/A	Annual broadleaf weeds.	Gallery 75 DF 0.66 to 1.33 lb/A.	Preemergence.	Use on nonbearing grapes only. Do not apply until soil has settled after transplanting. Tank mix with Surflan for grass control.
pendimethalin @ 2.0 to 4.0 lb/A	Annual broadleaf and grass weeds.	Prowl H₂O 2.0 to 4.0 qt/A.	Preemergence. Apply only to dormant plants. Do not apply after bud swell.	Use on nonbearing plantings only. Allow soil to settle around vines before applying. Do not apply overtop vines.
oxyfluorfen @ 1.25 to 2.0 lb/A	Annual broadleaf weeds.	Goal 2 XL 5 to 8 pts/A.	Use only on dormant grapes for pre-emergence or postemergence control of weeds.	Direct spray to base of plant. Do not apply after buds begin to swell or when foliage or fruit is present. Do not apply to grapes established less than 3 years unless vines are on a trellis wire at least 3 feet above the ground.
flumioxazin @ 0.19 to 0.375 lb/A	Annual grasses and small broadleaf weeds.	Chateau 51 WDG 6 to 12 oz/A.	Apply with hooded or shielded application equipment. Grapes established less than 2 years must be shielded from contact with spray solution using grow tubes.	Once vines break dormancy, do not apply in combination with glyphosate. Do not apply more than 6 oz per acre per application to vines less than 3 years old on soils having a sand plus gravel content greater than 80%.
napropamide @ 2 to 4 lb/A	Small-seeded broadleaf weeds and annual grasses.	Devrinol 50 DF 4 to 8 lb/A.	Preemergence.	Do not harvest within 35 days of treatment. Apply as a tank mix with a knockdown herbicide if vegetation has emerged at the time of application.
dichlobenil @ 4 to 6 lb/A	Annuals and many perennials	Casoron 4G 100 to 150 lb/A.	In early winter and not later than mid-February.	Granular form preferred. Apply in early spring. Incorporate lightly for best results. May be used in vineyards in first year after transplanting after vines are established. Do not apply immediately after transplanting.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
Postemergence				
glyphosate @ 0.75 to 1.5 lb/A	Annual weeds, bermudagrass and johnsongrass.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 1 to 2 qt/A.	Apply to actively growing weeds.	Direct to base and avoid contact with green bark or foliage. Do not apply to vines less than 3 years old or within 14 days of harvest. See label.
paraquat @ 0.25 to 0.5 lb/A	Annual weeds and foliage of perennials.	Gramoxone Inteon 1 to 2 pt/A.	Apply in spring with preemergence herbicide. If needed, repeat alone throughout the growing season as required to contain weeds.	Direct spray to weed foliage, avoiding vines. Do not graze treated areas.
sethoxydim @ 0.3 to 0.5 lb/A	Annual and perennial grasses including johnsongrass and bermudagrass.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Use low rate on annual grasses up to 6 inches tall; high rate on annual grasses up to 12 inches tall and perennial grasses. Broadleaf weeds and nutsedge(s) will not be controlled by Poast.	Do not apply within 50 days of harvest. Apply as a directed spray using 5 to 20 gal. water/acre and 40 to 60 psi pressure. Use flat fan nozzle tips. Always use a nonphytotoxic oil concentrate (1 qt/acre).
glufosinate @ 0.75 to 1.25 lb/A	Annual weeds.	Rely 1L 3 to 5 qt/A.	Postemergence to actively growing weeds.	Apply as a directed spray to emerged weeds in a minimum of 20 gal water per acre with a minimum of 30 psi spray pressure when weeds are 1 to 6 in. high. For spot application, use 1.5 to 4 oz per gal of water and spray to wet but not runoff. Do not allow spray to contact desirable foliage or green bark. Do not apply within 14 days of harvest. See label for specific rates. Rely can also be used for sucker control – see label for directions.
fluazifop-P @ 0.19 lb/A	Annual and perennial grasses including johnsongrass and bermudagrass.	Fusilade DX 2EC 1.5 pt/A.	Make application to johnsongrass – 12 to 18 inches tall; bermudagrass – 3 inches tall or with 4 to 6 inch runners; annual grasses – 2 to 8 inches tall. Broadleaf and nutsedge(s) will not be controlled by Fusilade.	Apply to NON-BEARING vines that will not be harvested within 1 year of application. Apply as a directed spray using 25 gal. water/acre and 30 to 60 psi pressure. Use flat fan nozzle tips and DO NOT contact foliage. Always use a crop oil concentrate (1 qt/25 gal. water/acre) or a nonionic surfactant (0.5 pt/25 gal water/acre).
clethodim @ 0.09 to 0.25 lb/A	Annual and perennial grasses.	Select 2 EC 6 to 16 oz/A.	Postemergence to grasses.	Use on nonbearing crop only. Do not apply within one year of harvest. Effective for annual bluegrass control.
carfentrazone @ 0.008 to 0.025 lb/A	Annual broadleaf weeds.	Aim 2EC 1 to 2 oz/A.	Postemergence to weeds less than 4 inches tall or rosettes less than 3 inches across.	After post directed using a hooded sprayer. Will burn crop foliage if contact is made. Add crop oil concentrate (1%) or surfactant (0.5%). Coverage is essential for control. Does not control grasses. Do not use on newly transplanted vines.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions	
FRUIT AND NUT CROPS [cont.]					
Strawberries (matted row)					
methyl bromide @ 240 lb/A	Most annual and perennial weeds.	240 lb/A.	Various	Preplant.	Inject in the soil 4 to 6 in. deep and cover with tarp immediately. Soil moisture should be near field capacity and soil temperature should be at least 50° F at treatment depth. Allow at least 2 weeks after treatment before transplanting. If tarp is removed, disking before planting will facilitate aeration.
paraquat @ 0.25 to 0.5 lb/A	Contact kill of green foliage.	1 to 2 pt/A.	Gramoxone Inteon	Postemergence.	For control of emerged broadleaf and grass weeds, use shields and direct spray between the rows to prevent contact with strawberry foliage. Use a non-ionic surfactant at a rate of 16 to 32 oz/100 gal spray mix or 1 gal approved crop oil concentrate per 100 gal spray mix. Do not apply within 21 days of harvest.
napropamide @ 4	Annual grasses and small seeded broadleaf weeds.	8 lb/A.	Devrinol 50 DF	Preemergence.	Apply to established plants before weed emergence anytime, except the interval between bloom and harvest. Irrigation or mechanical incorporation is essential within one week after application.
terbacil @ 0.1 to 0.3 lb/A	Annual broadleaf and grass weeds.	2 to 6 oz/A.	Sinbar	Preemergence.	For planting year: apply 2 to 3 oz of Sinbar per acre after transplanting but before new runner plants start to root. If strawberry transplants are allowed to develop new foliage before application, apply 0.5 to 1.0 inch of overhead irrigation immediately after application. For control of winter weeds, apply 2 to 6 oz per acre in late summer or early fall. If the crop is not dormant, apply 0.5 to 1.0 inch of overhead irrigation immediately after application. To extend control through harvest of the following year, apply 2 to 4 oz per acre just before mulching in the late fall. For harvest years: after postharvest renovation and before new growth begins in midsummer, apply 4 to 6 oz of Sinbar per acre in midsummer. To extend control through harvest of the following year, apply 4 to 6 oz of Sinbar per acre just before mulching in the late fall. Do not apply within 110 days of harvest. See label for more information.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
sethoxydim @ 0.3 to 0.5	Annual and perennial grasses.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Postemergence to grasses.	Apply to emerged grasses. Consult manufacturer's label for specific rates and best times to treat. Add 1 qt of crop oil concentrate per acre. Do not apply on days that are unusually hot and humid. Do not apply within 7 days of harvest.
clethodim @ 0.094 to 0.125 lb/A	Grasses.	Select 2 EC 6 to 8 oz.	Postemergence.	Apply postemergence for annual grasses in strawberries at 6 to 8 ounces per acre or bermudagrass and johnsongrass at 8 ounces per acre. Add 1 gallon crop oil concentrate per 100 gallons spray mix. Very effective in controlling annual bluegrass. Apply to actively growing grasses not under drought stress. Do not apply more than 8 ounces of Select per acre per application. Do not apply within 4 days of harvest.
fluazifop @ 0.25 to 0.38 lb/A	Annual and perennial grasses.	Fusilade DX 2EC 16 to 24 oz/A.	Postemergence, check label for timing for various weeds.	Use on nonbearing crop only. Do not apply within one year of harvest. Add crop oil or surfactant.
DCPA @ 6 to 9 lb/A	Annual grasses and small seeded broadleaf weeds.	Dacthal 75W 8 to 12 lb/A.	Preemergence.	Apply preplant incorporated or preemergence to weeds and repeat if necessary but not more than three applications should be applied any one year. Do not apply after first bloom.
2,4-D amine @ 0.5 to 1.0 lb/A	Annual broadleaf weeds.	Formula 40 1 to 2 pt/A.	Postemergence.	Apply to well-established strawberries after harvest and before runners form or when crop is dormant. Not more than two treatments per year. Do not apply during bud, flower, or fruit stage. Timing is very critical to avoid damage.
clopyralid @ 0.125 to 0.25 lb/A	Broadleaf weeds including clover, vetch, sowthistle, dock and thistle.	Stinger 3EC 0.33 to 0.67 pt/A.	Postemergence in spring or post-harvest to control emerged broadleaf weeds in established strawberries.	Do not use surfactant or mix with other pesticides. Do not apply within 30 days of harvest.
Strawberries (plastic culture)				
methyl bromide (see label)	Most annual and perennial weeds.	Various (See label.)	Preplant.	Inject into the soil 4 to 6 inches deep and cover with black plastic immediately. Soil moisture should be near field capacity and soil temperature should be at least 50°F at the treatment depth. Allow at least 2 weeks after treatment before transplanting.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
FRUIT AND NUT CROPS				
Strawberries (plastic culture) [cont.]				
paraquat @ 0.25 to 0.5 lb/A	Contact kill of green foliage.	Gramoxone Inteon 1 to 2 pt/A.	Postemergence.	Apply as a banded treatment using shields to the middles between plastic to kill emerged weeds. Add a nonionic surfactant at a rate of 16 to 32 oz/100 gal or 1 gal approved crop oil concentrate per 100 gal spray solution. Do not apply within 21 days of harvest.
clopyralid @ 0.125 to 0.187 lb/A	Broadleaf weeds including clover, vetch, sowthistle, dock and thistle.	Stinger 3EC 0.33 to 0.5 pt/A.	Postemergence.	Do not use surfactant or mix with other pesticides. Do not apply within 30 days of harvest.
glyphosate @ 0.5 to 0.94 lb/A	Most emerged weeds.	Roundup WeatherMax 5.5 L 11 to 22 oz/A.	Postemergence.	Apply as a wiper application or as a hooded or shielded spray in row middles or postharvest. To avoid severe injury, do not let the spray contact any part of the strawberry plant. Do not apply within 14 days of harvest.
carfentrazone @ 0.008 to 0.025	Annual broadleaf weeds.	Aim 2EC 0.5 to 1.6 oz/A.	Postemergence to weeds less than 4 inches tall or rosettees less than 3 inches across.	Apply post directed using a hooded sprayer. Will burn crop foliage if contact is made. Add crop oil concentrate (1%) or surfactant (0.5%). Coverage is essential for control. Does not control grasses.
clethodim @ 0.125 lb/A	Annual and perennial grasses.	Select 2 EC 8 oz/A.	Postemergence grasses.	Do not apply within 4 days of harvest. Do not apply more than 8 oz per acre per application. Effective for annual bluegrass control.
oxyfluorfen @ 0.5 lb/A	Annual broadleaf weeds including Carolina geranium and cut-leaf evening primrose and a few annual grasses.	Goal 2 XL 2 pts/A.	Preemergence, at least 30 days before transplanting.	Apply to the surface of pre-formed beds at least 30 days before transplanting to control many broadleaf weeds that will emerge in the hole made for the crop. Incorporation is not needed but may reduce crop injury. Plastic may be applied any time after Goal is applied. Sooner rather than later will result in better weed control.
napropamide @ 4	Annual grasses and small seeded broadleaf weeds.	Devrinol 50 DF 8 lb/A.	Preemergence.	Apply as a banded preemergence treatment to the middles between plastic before weed emergence. Tank mixture with paraquat will provide pre- and postemergence weed control. Rainfall or irrigation within 24 hours after application is needed for optimum control. Effective on volunteer small grains (wheat, etc.) if applied before emergence.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
sethoxydim @ 0.3 to 0.5	Annual and perennial grasses.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Postemergence to grasses.	Apply as postemergence application to kill emerged grasses. Most effective on actively growing grasses. See label for specific rates and best times to treat. Add 1 qt per acre of crop oil concentrate to spray solution. Do not apply broadcast over plastic. Very effective control of ryegrass but will not control sedges. Also effective on volunteer small grains (wheat, etc.). Do not apply within 7 days of harvest.
DCPA @ 6 to 9 lb/A	Annual grasses and small seeded broadleaf weeds.	Dacthal 75W 8 to 12 lb/A.	Preemergence.	Apply as a banded preemergence treatment to the middles between plastic before weed emergence. Effective on volunteer small grains (wheat, etc.) if applied before emergence.
Pecans				
Preemergence				
diuron @ 1.6 to 3.2 lb/A	Most annual broadleaf weeds and grasses.	Karmex 80 DF 2 to 4 lb/A.	Apply in spring or early summer.	Apply as directed spray. Avoid contact of foliage with spray. Do not use on soils with less than 1/2% organic matter. Do not graze livestock in treated groves.
simazine @ 1 to 2 lb/A	Most annual broadleaf weeds and grasses.	Princep 1 to 2 qt/A 4L. 1.1 to 2.2 lb 90WDG.	Apply in spring or early summer.	Direct to floor of orchard. Avoid contact with foliage. Do not use on sand or loamy sand soils. May be tank mixed with Roundup, Gramoxone or Surflan.
oryzalin @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	Surflan 4 AS 2 to 4 qt. Use low rate for short term (4 months) weed control and high rate for 6 to 8 months weed control. Can be tank mixed with Karmex or Princep . See comment at right.	Apply to weed-free soil. Mix any weed residues or trash thoroughly into soil before application.	Sprayer must have thorough agitation and avoid spray drift to foliage. May be tank mixed with Karmex or Princep as recommended individually to broaden spectrum of control. See label for details. May be tank mixed with Roundup, Gramoxone or Princep.
dichlobenil @ 4 to 6 lb/A	A wide range of annual weeds and some perennials.	Casoron 50W 8 to 12 lb/A.	Apply in January or February. Granular form may be applied in late fall.	Do not apply within 6 months after transplanting or within 1 month of harvest. Rainfall or sprinkler irrigation is needed after application to move the herbicide into the soil.
norflurazon @ 2 to 4 lb/A	Annual grasses and some broadleaf annual weeds.	Solicam 80 DF 2.5 to 5 lb/A.	Apply in early spring or after harvest in the fall.	Do not apply until transplanted trees have completed their first growing season (fall application). Make only one application per year. Do not graze treated areas. May be tank mixed with Gramoxone.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
FRUIT AND NUT CROPS				
Pecans				
Preemergence [cont.]				
diuron + terbacil @ 1 to 1.5 + 0.8 to 1.6 lb/A	A wide range of annual weeds.	Karmex 80 DF + Sinbar 80W 1.2 to 1.8 lb/A + 1 to 2 lb/A.	Apply in early spring.	Use under trees established 2 years or more. See label for soil type and organic matter precautions. Do not graze treated areas.
napropamide @ 2 to 4 lb/A	Annual grasses and some broadleaf weeds.	Devrinol 50 DF 4 to 8 lb/A.	Apply to weed-free soil.	May be used on new plantings after soil settles around roots.
Postemergence				
glyphosate @ 0.75 to 1.5 lb/A	Annual weeds, johnsongrass and bermudagrass.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 1 to 2 qt/A.	To actively growing vegetation.	Direct to base of tree and do not allow drift to contact foliage or green bark. See label for details. May be tank mixed with Surflan or Princep.
paraquat @ 0.25 to 0.5 lb/A	Annual weeds and foliage of perennials.	Gramoxone Inteon 1 to 2 pt/A.	Apply in spring and repeat as needed.	Directed spray. Do not allow spray to contact green stems, fruit or foliage of pecan tree. Do not apply when nuts to be harvested are on ground. May be tank mixed with Princep or Surflan.
sethoxydim @ 0.3 to 0.5 lb/A	Annual and perennial grasses including johnsongrass and bermudagrass.	Poast 1.5 EC 1.5 to 2.5 pt/A.	Use low rate on annual grasses up to 6 inches tall; high rate on annual grasses up to 12 inches tall and perennial grasses. Broadleaf weeds and nutsedge(s) will not be controlled by Poast.	Apply to NON-BEARING trees that will not be harvested within 1 year of application. Apply as a directed spray using 5 to 20 gal. water/acre and 40 to 60 psi pressure. Use flat fan nozzle tips. Always use a nonphytotoxic oil concentrate (1 qt/acre).
fluazifop @ 0.19 lb/A	Annual and perennial grasses including johnsongrass and bermudagrass.	Fusilade DX 2 EC 1.5 pt/A.	Make application to johnsongrass – 12 to 18 inches tall; bermudagrass – 3 inches tall or with 4 to 8 inch runners; annual grasses – 2 to 8 inches tall. Broadleaf weeds and nutsedge(s) will not be controlled by Fusilade.	Do not apply to pecans within 30 days of harvest. Apply as a directed spray using 25 gal. water/acre and 30 to 60 psi pressure. Use flat fan nozzle tips and DO NOT contact pecan tree foliage. Always use a crop oil concentrate (1 qt/25 gal. water/acre) or a nonionic surfactant (0.5/25 gal. water/acre).