

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
ORNAMENTALS				
Postplant but Preemergence to Weeds				
prodiamine @ 0.75 lb/A	Annual grasses and small-seeded broadleaf weeds.	Barricade WDG 1.15 lb/A.	Postplant but preemergence to weeds.	Apply to established trees, shrubs and flowers listed on the label. Allow the soil to settle around the roots before application. Do not apply more than 1.15 lb in any 60-day period and do not exceed 2.3 lb per year.
dithiopyr @ 0.5 lb/A	Annual grasses and some broadleaf weeds.	Dimension Ultra 40 WP 1.2 lb/A.	Preemergence to weed-free soil.	Apply to established ornamentals. Do not incorporate. Activate by applying 0.5 inch of sprinkler irrigation. Check label for tolerant species.
isoxaben @ 0.5 to 1 lb/A	Many annual broadleaf weeds.	Gallery 75 DF 0.66 to 1.33 lb/A.	Postplant but preemergence to weeds.	Do not apply until the soil has settled around the roots and no cracks are present. Will not control emerged weeds. Combine with Surflan for improved annual grass control. See label for plant back restrictions. Do not treat seed, liner or cutting beds. Do not treat ground covers until they are established and well-rooted.
pendimethalin @ 2 to 3 lb/A	Annual grasses and small-seeded broadleaf weeds.	Pendulum 2G 100 to 150 lb/A.	Postplant but preemergence to weeds.	May be applied to container- and field-grown ornamentals. Do not apply to moist foliage. Apply only to established plants. Do not apply to soil with cracks that would allow direct contact of Pendulum with roots. Do not apply to seedbeds, liner or transplant beds. Weed control spectrum similar to Treflan (trifluralin).
metolachlor @ 1.2 to 2.5 lb/A	Annual grasses and small-seeded broadleaf weeds.	Pennant Magnum 7.62 1.3 to 2.6 pt/A.	Postplant but preemergence to weeds.	Apply to weed-free soil. Direct toward the base of ornamentals established at least 2 weeks. For additional broadleaf control, tank mix with Princep. Derby is a premix which contains Princep and Pennant.
simazine @ 1 to 2 lb/A	Annual grasses and broadleaf weeds.	Princep 4L 1 to 2 qt/A.	Postplant but preemergence to weeds.	Apply in fall or spring before new weed growth appears. Do not apply on Japanese holly, azaleas or rhododendrons. Apply only once per year. Apply at least one year after transplanting.
oxadiazon @ 2 to 4 lb/A	Annual grasses and some broadleaf weeds. Does not control chickweed.	Ronstar 2G 100 to 200 lb/A.	Postplant but preemergence to weeds.	Apply to weed-free soil. Safe on a wide variety of plant material. Disturbing soil after application may result in reduced weed control. Use on container- and field-grown nursery stock. Do not apply when the foliage is wet. Higher rates may be needed on bark/peat media. For continued weed control, a second application may be made 60 to 120 days later on some species. Ronstar 50WP may cause foliar injury to species that are not affected by Ronstar G. Consult WP label. Toxic to fish. Do not contaminate water.

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oxyfluorfen + oryzalin @ 2 + 1 lb/A	Annual grasses and some broadleaf weeds.	100 lb/A. Rout	Postplant but preemergence to weeds.	Use on container- and field-grown nursery stock. Apply to weed-free soil when plant foliage is dry and plants are not in a growth flush. Apply overhead irrigation to wash granules off foliage. Do not apply when foliage is wet.
isoxaben + trifluralin @ 0.5 to 1.0 + 2.0 to 4.0 lb/A	Annual grasses and broadleaf weeds.	100 to 200 lb/A. Snapshot 2.5 TG	Postplant but preemergence to weeds.	Prepackaged mix of Gallery and Treflan. Apply before weed germination.
trifluralin + isoxaben + oxyfluorfen @ 2 + 0.25 + 0.25 to 4.0 + 0.5 + 0.5 lb/A	Wide range of grass and broadleaf weeds.	100 to 200 lb/A. Showcase 2.5 G	Preemergence.	Useful on a wide range of container- and field-grown ornamentals. See label for sensitive species.
flumioxazin @ 0.25 to 0.38 lb/A	Many annual grasses and broadleaf weeds.	8 to 12 oz/A. SureGuard	Preemergence or postemergence to weeds.	This is a new product. It is a very active herbicide. Read the label carefully before using. Do not apply to wet foliage. Do not apply in an enclosed structure. Before moving plants into an enclosed structure, apply 1 inch of irrigation water and wait 14 days. Can severely injure bedding plants and herbaceous perennials, and immature foliage on woody plants.
flumioxazin @ 0.38 lb/A	Many annual grasses and broadleaf weeds.	150 lb/A. BroadStar	Preemergence to weeds.	This is a new product. It is a very active herbicide. Read the label carefully before using. Do not apply to wet foliage. Do not apply in an enclosed structure. Before moving plants into an enclosed structure, apply 1 inch of irrigation water and wait 7 days. Can severely injure bedding plants and herbaceous perennials, and immature foliage on woody plants.
oryzalin @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	2 to 4 lb/A. Surflan AS	Postplant but preemergence to weeds.	May be applied over-top or as a directed spray on field- and container-grown ornamentals. Will not control established weeds. Irrigate to improve weed control. XL is granular formulation that contains Surflan and Balan.
trifluralin @ 2 to 4 lb/A	Annual grasses and small-seeded broadleaf weeds.	40 to 80 lb/A. Treflan 5G, Preen	Preemergence or preplant incorporated.	Use lower rate if incorporated, higher rate if irrigation is used for activation.
prodiamine @ 0.5 to 1.5 lb/A	Annual grasses and some small-seeded broadleaves.	132 to 300 lb/A. RegalKade G	Preemergence to weeds.	Apply before weeds germinate. Do not apply more than 300 lb per year.
oxadiazon + prodiamine @ 2.0 + 0.4 lb/A	Annual grasses and some small-seeded broadleaves.	200 lb/A. RegalStar G	Preemergence to weeds.	Apply before weeds germinate. Do not apply when foliage is wet.

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bentazon @ 0.75 to 1.0 lb/A	Broadleaf weeds, annual sedges and yellow nutsedge.	Basagran T/O, Lescogran 1.5 to 2.0 pt/A.	Early postemergence for broadleaf annuals, during active growth for yellow nutsedge.	Apply as a directed spray to small, actively growing weeds and away from the foliage of desirable plants. Add a crop oil or nonionic surfactant. A second application 7-10 days later may be needed for acceptable yellow nutsedge control.
glufosinate @ 0.75 to 1.5 lb/A	Most annual weeds, top burn on perennials.	Finale 2S 3 to 6 pt/A.	During active growth.	Finale is a nonselective herbicide. Post-directed spray only. Use as an edging treatment. Avoid contact with desirable plants including foliage and green bark. Use shield to prevent spray from contacting desirable plants.
fluazifop-P @ 0.09 to 0.38 lb/A	Grasses.	Fusilade II 6 to 24 oz/A.	Early postemergence for annual grasses, johnsongrass 8-18", bermudagrass 4-8" runners.	May be applied over-top to selected ornamentals and as a directed spray to others. Do not apply to grass weeds under environmental stress. Use nonionic surfactant for ornamentals (0.5 fl oz/gal water), not crop oil concentrate.
imazaquin @ 0.38 to 0.5 lb/A	Broadleaf annuals, yellow and purple nutsedge.	Image 1.5 LC 2 to 3 pt/A.	Postemergence also has soil activity.	Add nonionic surfactant. Do not apply over the roots of species that are not approved on the label.
glyphosate @ 0.75 to 4.0 lb/A	Grasses and broadleaf weeds.	Glyphosate (4 lb/gal formulations) 3 to 8 pt/A.	Postemergence.	Apply as a directed spray in established plantings. Avoid contact with bark or foliage of desirable plants. Cleared for site preparation before planting nursery stock.
sethoxydim @ 0.19 to 0.47 lb/A	Grasses.	Segment 1 EC 2.25 to 3.75 pt/A.	Early postemergence for annual grasses, johnsongrass 8-18", bermudagrass 4-8" runners.	Apply over-top of ornamentals to actively growing grasses. Retreatment may be needed for perennial grasses. Do not apply to grass weeds under environmental stress. Add a crop oil concentrate.
clethodim @ 0.125 to 0.25 lb/A	Annual and perennial grasses.	Envoy 0.94 EC 17 to 34 oz/A.	Postemergence to actively growing grasses.	Add 0.25% nonionic surfactant (1 pt in 50 gal). Crop oil concentrate is not recommended.
halosulfuron @ 0.063 lb/A	Purple nutsedge, yellow nutsedge, green kyllinga.	Sedgehammer 75 DF 1.33 oz/A.	Postemergence to weeds, start applications in late May to early June, repeat 6 to 8 weeks later.	Add as a post-directed spray around any established woody ornamental plants. Wait 3 months after transplanting before using this product. Begin nutsedge treatment program in May to early June to reduce tuber formation. Manage injured foliage of azalea, crape myrtle, cotoneaster and Japanese holly.

ORNAMENTALS

Ornamental Weed Control Tips:

1. None of the preemergence herbicides will give complete control of all weed species. Tank mixing herbicides will usually broaden the spectrum of control. Typical combinations are a grass herbicide such as Surflan or Pendulum plus a broadleaf herbicide such as Princep or Gallery. If a chemical application kills all but one species, that species will multiply, resulting in a shift in the weed population. The resulting shift will eventually render that product ineffective. Rotate chemical usage to reduce the buildup of tolerant weeds. Directed sprays of nonselective herbicides such as Roundup or Gramoxone and cultivation will help provide control of escapes.
2. A single application of a preemergence herbicide will not provide season-long control. Late fall or winter applications of Gallery, Princep or Casoron will provide weed control well into the growing season. When control begins to break, the area may be clean cultivated or treated with a nonselective postemergence herbicide, and an application of one of the other preemergence herbicides can be made.
3. Always use a new herbicide on a trial basis until sufficient experience is gained to feel comfortable with its use. Leave an untreated area for comparison when using new product so that weed control and crop injury comparisons are possible.
4. Small, shallow-rooted plants are more susceptible to herbicide injury than mature, deep-rooted plants. Other factors that increase the chances of injury are (1) sandy soils and excessive watering and (2) failure to use irrigation to remove granular herbicides from the foliage.
5. Use a separate sprayer for herbicides only. It is very difficult to completely remove all traces of some chemicals from sprayers.
6. Consult the label precautions before using any ornamental herbicide since specific cultivars within a genus and species may have varying degrees of sensitivity to a herbicide. In addition, be certain the herbicide is approved for the use that you have chosen, i.e., propagation beds, container, transplanted liners or rooted cuttings, or large, well-established plants.