



Weed Management in Grapes ¹

Jeffrey G. Williamson²

The following table contains information on chemical weed control for grapes grown in Florida. Always read and follow all label directions carefully and exactly when applying any pesticide. Soil types and possible crop injury from herbicides vary greatly throughout Florida. Do not apply a herbicide to an inappropriate soil type even if the herbicide is labeled for that crop. See Table 1.

-
1. This document is HS19, one of a series of the Department of Horticultural Sciences, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date: 1994. Revised: November, 2007. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
 2. Jeffrey G. Williamson, professor, Horticultural Sciences Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean

Table 1. Chemical weed control in grapes.

Pre-emergence		
Common name (Trade name)	Pounds active ingredient per acre	Time of application
Dichlobenil (Casoron) 4G	4 to 6	Apply in January and early February. Do not apply to plants sooner than 4 weeks after planting.
Weeds Controlled and Remarks: Controls annuals and some perennials. Apply in early spring before annual weed seeds germinate.		
Diuron (Karmex) 80DF	1.6 to 2.4	Apply in the spring prior to weed germination.
Weeds Controlled and Remarks: Annual broadleaf weeds, annual grasses and perennial weed seedlings. Use in vineyards at least 3 years old. Use and rate used depend on soil texture and organic matter content. Do not use on sand, loamy sand, gravelly soils, or exposed subsoils, nor where organic matter is less than 1%. Injury may occur where heavy rains occur soon after application on soils having less than 2% organic matter. See label for additional use restrictions based on soil type. On soils low in clay or organic matter severe plant injury may occur if heavy rainfall or more than 1 inch of irrigation occurs soon after treatment. Do not graze treated area. Moisture is required to activate the chemical.		
Flumioxazin (Chateau) 51 WDG	0.19 to 0.375	See label.
Weeds Controlled and Remarks: Controls annual grasses and small seeded broadleaf weeds. Grape vines established for less than 2 years must be protected from contact with spray using grow tubes, non-porous wraps or waxed containers. Do not make a sequential application within 30 days of the initial application. Do not apply within 60 days of harvest. Do not apply more than 6 oz per acre per application on plants less than 3 years old on soils having a sand plus gravel content of more than 80%. Do not apply in combination with glyphosate after crop breaks dormancy.		
Napropamide (Devrinol)	See label	Apply before spring weeds emerge anytime after transplanting.
Weeds Controlled and Remarks: Controls annual grasses and broadleaf weeds. Apply to weed free soil surface. Treat newly planted or established trees. Treatment must be incorporated in or irrigated in within 24 hours if no rainfall occurs. Use as directed-spray and avoid contact with fruit or foliage. Do not apply when fruit are on the ground. Do not graze treated areas.		
Oryzalin (Oryzalin, Surflan) 4AS	2 to 4	Anytime following transplanting after the ground has settled.
Weeds Controlled and Remarks: Annual grasses and broadleaf weeds. Existing vegetation should be tilled prior to application or destroyed by a contact herbicide. Sprinkler irrigate or use shallow cultivation if a single 1/2 - 1" rain does not occur within 21 days following application.		
Oxyfluorfen (Goal or OxiFlo) 2EC (GoalTender) 4E	1.25 to 2	Use only on dormant vines. Do not apply after buds begin to swell or when fruit or foliage are present.
Weeds Controlled and Remarks: Controls annual broadleaf weeds. Do not apply to vines established less than 3 years unless the vines are on a trellis wire at least 3 feet above the soil surface. May be tank mixed with various pre and post-emergence herbicides.		

Table 1. Chemical weed control in grapes.

Simazine (Princep, Simazine) 90WDG (Princep, Simazine) 4L	2 to 4	Anytime between harvest and early spring. Apply before germination of annual weed seed to plantings at least 3 years old.
Weeds Controlled and Remarks: Controls certain annual grasses and broadleaf weeds. Do not use in vineyards established less than 3 years. Do not apply on gravelly, sand, or loamy sand soil. Avoid contact with fruit, foliage or stems. Do not allow animals to graze treated areas. May be tank mixed with certain post-emergence herbicides to control existing weeds.		
Oryzalin (Oryzalin, Surflan) 4AS + Simazine (Princep) 90WDG (Princep) 4L	2 to 4 + 2 to 4	Apply before weed emergence.
Weeds Controlled and Remarks: See comments and labels for each respective herbicide.		
Pre-emergence - non-bearing only		
Common name (Trade name)	Pounds active ingredient per acre	Time of application
Pendimethalin (Prowl) H ₂ O 4AS	2 to 4	Apply to dormant, newly planted and 1-year-old vines after soil has settled. Do not apply after buds have started to swell. Non-Bearing vines only.
Weeds Controlled and Remarks: Controls annual grasses and small seeded broadleaf weeds.		
Post-emergence		
Common name (Trade name)	Pounds active ingredient per acre	Time of application
Carfentrazone-ethyl (Aim) 2 EC	0.016 to 0.031	Do not apply to newly transplanted vines within 3 days of harvest.
Weeds Controlled and Remarks: Controls annual broadleaf weeds. Do not allow spray to contact green bark, leaves, flowers, or fruit of desirable plants. Use a minimum spray volume of 20 gpa. Use with crop oil concentrate or nonionic surfactant (see label).		
Fluazifop-butyl (Fusilade DX) 2EC	0.25 to 0.38	Apply before grasses area at a specific growth stage in non-bearing plantings only.
Weeds Controlled and Remarks: Apply to nonbearing vines only. Certain annual and perennial grasses. Use with a crop oil or non-ionic surfactant will be necessary (see label). May be used for site preparation.		
Glufosinate (Rely) 1SL	0.75 to 1.25	Treat weeds when 1-6 inches high. Do not apply within 14 days of harvest.
Weeds Controlled and Remarks: Controls most annual weeds and some perennials. Use minimum of 20 gallons per acre with a minimum spray of 30 psi. Do not allow spray to contact green, uncultured, bark or foliage of desirable plant. May be used for control of suckers. See label for more details.		

Table 1. Chemical weed control in grapes.

Glyphosate (Various)	1 to 2	See label
Weeds Controlled and Remarks: Postemergence activity only. Damages all green tissue contacted. Has no effective residual activity. Rate used depends on weed species to be controlled. Do not treat between 14 days before harvest to fall dormancy when no green vegetation, canes, or shoots exists. Do not feed or forage treated crops within 8 weeks after application. Do not allow spray, drift, or mist to contact foliage, green bark, suckers, or vines and renewals less than 3 years of age. See label for restriction on application equipment.		
Paraquat (Various)	0.66 to 1	Apply to weeds when succulent and is 1-6" high.
Weeds Controlled and Remarks: Controls most annual grasses and broadleaf weeds. Perennial weeds are desiccated. Use a non-ionic surfactant (see label). Do not allow spray to contact green stems, bark less than 1 year old, fruit or foliage. Do not spray under windy conditions and use a shield for young vines. Do not graze on treated areas. May be used for sucker suppression (see label).		
Sethoxydim (Poast) 1.5EC	0.3 to 0.5	Apply to actively growing grasses. See label for specific timings.
Weeds Controlled and Remarks: Controls most annual and perennial grasses. Rate depends on type of grass to be controlled. See label for information on additives that increase herbicidal activity. Control of perennial grasses may require sequential applications. Do not apply within 50 days of harvest.		
Post-emergence - non-bearing only		
Common name (Trade name)	Pounds per active ingredient per acre	Time of application
Clethodim (Arrow, Select) 2EC (Select Max) 1EC	0.07 to 0.125	Do not apply within one year of harvest. see label.
Weeds Controlled and Remarks: Controls annual and perennial grasses. Non-bearing vines. Control of perennial grasses may require sequential applications. See labels for further information on using these products.		
Fluazifop-butyl (Fusilade DX) 2EC	0.25 to 0.38	Apply before grasses area at a specific growth stage in non-bearing plantings only.
Weeds Controlled and Remarks: Apply to nonbearing vines only. Certain annual and perennial grasses. Use with a crop oil or non-ionic surfactant will be necessary (see label). May be used for site preparation.		