

**PRE-PLANT NONSELECTIVE WEED CONTROL (Refer to Herbicide Label for Specific Use Listing)**

<b>Common Name</b>	<b>Trade Name(s)</b>	<b>Soil Fumigant</b>	<b>Soil Residual/ root uptake</b>	<b>Foliar Uptake</b>	<b>Contact Activity</b>
Ammoniated soaps of fatty acids	Quick Fire	—	—	—	Y
Bromacil	Acti-Cil, Hyvar, Opti-Kill,	—	Y	Y	—
Bromacil + diuron	Krovar	—	Y	Y	—
Dazomet	Basamid	Y	—	—	—
Diquat	Reward, Aquatrim II	—	—	—	Y
Glufosinate-ammonium	Finale, Derringer	—	—	Y	Y
Glyphosate	Gly-Flo, Prosecutor, Razor, Roundup Pro & Pro Dry, Trailblazer, Touchdown Pro, + many others	—	—	Y	—
Glyphosate + diquat dibromide	QuickPRO, Prosecutor Swift Acting			Y	Y
Imazapyr	Arsenal	—	Y	Y	—
Imazapyr + diuron	Sahara	—	Y	Y	—
Metam sodium	Metam CLR, Vapam HL, Soil Prep	Y	—	—	—
Methyl bromide	MB 98, MBC, Dowfume MC-2, Brom-o-gas, Profume, Terr-o-gas	Y	—	—	—
Pelargonic acid	Quik, Scythe	—	—	—	Y
Prometon	Pramitol, Spot	—	Y	—	—
Prometon + 2,4-D	Vegemec	—	Y	Y	Y
Tebuthiuron	Spike	—	Y	—	—

Y=yes.

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Methyl bromide	Dowfume MC-2 Brom-o-gas Profume Terr-o-gas (1 to 2 lb/100 ft <sup>2</sup> )	Non-selective, including bermudagrass, nutsedge, and soil pathogens & nematodes	Methyl bromide is formulated as liquid gas under pressure that forms a vapor when released. One to 1½ lb material is used per 100 sq.ft. treated soils. Use the higher rate when soils are heavy in texture, wet, or soil temperatures are below 60 F. Fumigation will not be effective if soil temperature is below 50 F. Soil should be moist but not saturated when treated. Before use, the soil should be in a condition suitable for planting including seedbed preparation by plowing soil 8 to 10 inches in depth, free of clods and undecomposed organic matter, then releasing the chemical under a gasproof (plastic) cover with the edges sealed and leaving it for 24 to 48 hours. Control will be only as deep as the soil is adequately tilled. Most other soil pests are also controlled. Grass can be planted 2 to 3 days after cover removal but do not disturb soil below 2 inches when planting. Unclassified herbicide family. <b>Methyl bromide is a toxic material used by professional applicators only, slated to be phased out starting Jan. 1, 2005. Some methyl bromide formulations are Restricted Use Pesticides.</b> Hiring a contractor who specializes in fumigation is recommended for those unfamiliar with the process. Chloropicrin is added as a warning agent and will irritate eyes and lungs. Weed seeds with hard, water-impermeable seed coats such as mallow, sicklepod, Carolina geranium, dichondra, bindweed, prickly sida, white clover, redstem filaree, and morningglory are not controlled by fumigants. If soil is too wet or dry, nutsedge control may be erratic.
Metam-sodium (metham)	Vapam 33% (50 to 100 gal/A )  Vapam HL 42% (30 to 75 gal/A)  Sectagon	Non-selective	Both products must first decompose to the biocidal ingredient, methyl isothiocyanate, thus, inconsistent pest control often results as temperature, plant residue, and soil moisture affect this conversion. A plastic or polyethylene cover is not required but increased control usually results with one. When a cover is not used a water soil-seal method should be followed. Cultivate the soil to the desired depth of fumigant penetration. Soil temperatures should be above 50F before use. Moisten the soil and use 1 to 2 pints of metham product per 100 sq.ft. in 2 to 5 gallons of water or 8 to 10 oz of Dazomet per 100 sq.ft. of prepared soil surface. The soil should then immediately be incorporated with a rotary tiller 4 to 8 inches deep and sealed with water at 15 gals. per 100 sq.ft. Light rolling will improve soil/water seal. If a cover is available, treat the soil in front of a rotary tiller. Cover the soil for 2 days. Planting may take place 2 to 3 weeks after treatment. Aeration may be required by rototilling before planting. Metham is a dithiocarbamate herbicide member. <b>Read and follow all label directions. Metham is a restricted-use-pesticide</b> while Dazomet is not. Control of legumes, sedges from seed, and morningglories with dazomet may be erratic.
Dazomet	Basamid 99 G (255 to 450 lb/A)		
glyphosate (4 lb ai/A)	Roundup Pro/4S Touchdown Pro + others (4 to 5 qts/A)	Torpedograss, bermudagrass, nutsedges, other perennial weeds.	These are applied only to unwanted vegetation and will not control non-germinated seeds, diseases, nematodes, or other pests. Used also for edging and trimming. Use 4 to 5 quarts per acre glyphosate (4 lb/gal) for broadcast bermudagrass control. Apply to actively growing green vegetation that is at least 4 to 5 inches tall. Wait 2 to 3 weeks after application for regrowth and re-apply. A minimum of 3 applications will be required to control bermudagrass or torpedograss. Fusilade II at 24 oz/a can be mixed with glyphosate (4 lb/gal) at 3 qts/a and applied twice for comparable control of bermudagrass (~95%) to 3 applications of glyphosate alone. However, 14 days should lapse between the last treatment and seeding. For spot treatment, Glyphosate (4 lb/gal) is applied at 2 oz. per gallon of water; Reward 2EC is used at 4 teaspoons (0.75 fl oz) + 1 teaspoon of nonionic surfactant per gallon of water. QuickPRO is used at 1.5 oz per gallon while Finale 1SC is used at 1.5 to 4 fl oz per gallon of water without additional surfactant. Finale has limited translocation, thus, is good for edging creeping turfgrasses. Do not apply any of these products to desirable plants. Glyphosate and glufosinate are Amino Acid Derivative herbicide family members while diquat is a bipyridylum.
glyphosate + diquat (3.55 to 6.7 lbs)	QuickPRO 76 WG (4.5 to 9 lb/A) RazorBurn 3.11L (7.5 qts/A)	Non-selective.	
glufosinate (0.75 to 1.5 lb ai/A)	Finale 1SC (0.75 to 1.5 gal/A)		
diquat (1 lb ai/A)	Reward 2EC (0.5 gal/A)		

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diquat + glyphosate + indaziflam (10.5 lb ai/A)	Specticle Total 1.95L (5.4 gal/A)	Total vegetation control	Mix 16 fl oz/gal of water to cover 1,000 ft <sup>2</sup> . Maximum yearly use rate of 32 fl oz/1,000 ft <sup>2</sup> . Make a subsequent application 4 months after the initial to extend weed control. For non-selective weed control in ornamental beds, apply only to established plants (≥1 yr old) and prior to mulching.

**Note:** EPA Soil Fumigation Information website: <http://www2.epa.gov/soil-fumigants>.