

GRASS SEED CROPS—Continued From Front Side

Western Oregon: On alta fescue, Astoria bentgrass, Highland bentgrass, Kentucky grass (Merion bluegrass) and orchardgrass, apply 2 to 4 lbs. per acre between October 1 and November 15. In fields where ash residues have accumulated from burning straw, use 3 to 4 lbs. per acre; spread unburned chaff or straw with a harrow or chopper before application. If perennial velvetgrass (*Holcus lanatus*) is a problem, use 4 lbs. per acre. For best results, apply as soon as possible after fall rains start. Established weeds (beyond 2 to 4 leaf stage) should be removed prior to treatment.

Well established vigorous stands of spring-planted alta fescue, Kentucky bluegrass and orchardgrass may be treated the following fall provided the crop is planted before April 1 and treatment is not applied before October 15; use 2 lbs. per acre.

Oregon: For use in newly planted bentgrass, Chewings fescue, Kentucky bluegrass, perennial ryegrass, orchardgrass and tall fescue. During planting operation, spray Aqua Nu Char or Gro Safe (activated charcoal) as a 1" band on soil surface at rate of 300 lbs. per acre (broadcast basis; equivalent to 15 lbs. per acre of crop where row spacing is 20"). Mount nozzles to apply directly over seed rows to prevent crop injury. Follow with "Karmex" as a single broadcast spray at rate of 2½ to 3 lbs. per acre; apply as soon as possible after planting but before crops or weeds emerge and before rains or sprinkler irrigation. Fall or spring plantings may be treated; best results usually occur with early fall plantings. Treatment will not control downy brome or wild oats.

OATS (Drill-Planted): Do not replant treated areas to any crop within one year after last application as injury to subsequent crops may result.

Spring Oats—Idaho, Eastern Oregon, Eastern Washington: Use in areas where average annual rainfall exceeds 16". Make a single application of 1 to 1½ lbs. per acre after planting, either before or after oats emerge but within 6 weeks of planting. Best results are usually obtained when application is made 3 to 4 weeks after planting. Apply before weeds are 3" to 4" tall.

Winter Oats and Mixtures with Peas or Vetch—Western Oregon and Western Washington: Make a single application of 1½ to 2 lbs. per acre as soon as possible after planting but before emergence of the crop.

PEPPERMINT—Pacific Northwest: Apply 3 lbs. per acre just after the last cultivation in the spring prior to emergence of peppermint. Do not apply to newly planted (less than 1 year) nor to emerged peppermint as injury may result.

SORGHUM (GRAIN)—Southwestern States: Apply ¼ to ½ lb. per acre; add 1 pt. Surfactant WK per 25 gals. of spray. Apply as a directed postemergence broadcast or band spray after sorghum is 15" tall to control weeds 2" to 4" in height. DO NOT SPRAY OVER TOP OF SORGHUM. Use the lower rate on broad-leaved weeds up to 2" tall; use the higher rate on grasses up to 2" and broadleaved weeds up to 4" tall. When the lower rate is used, a second application may be made if needed provided the amount applied in one crop year does not exceed ½ lb. per acre. Treatment of weeds under drought stress is usually ineffective.

Do not replant treated areas to crops other than cotton or corn within 4 months following band treatment and 6 months following broadcast treatment as crop injury may result.

SUGARCANE: To prevent possible crop injury on new cane varieties, tolerance to "Karmex" should be determined prior to adoption as field practice. Do not treat sugarcane growing on thinly covered sub-soils or rocky areas as crop injury may result. Temporary chlorosis of the crop may result from application over emerged cane; to minimize chlorosis, use directed postemergence sprays.

Florida: Preemergence—For high organic soils, apply 2 to 4 lbs. per acre as a broadcast or band spray prior to weed emergence after planting or after harvesting plant crop (for ratoon crop). **Postemergence—**Make 1 or 2 applications of 2 lbs. per acre as needed by directed spray inter-row. Alternatively, for panicum control, make up to 3 applications of ½ to 1 lb. per acre as a directed spray after cane has emerged but before panicum exceeds 2" in height; add 1 qt. Surfactant WK per 100 gals. of spray. Adjust nozzles to spray beneath cane plants and between rows to cover weed foliage and to minimize contact of cane leaves with spray or drift. Do not apply more than 6 lbs. total per acre between planting (or ratooning) and harvest.

Hawaii and Puerto Rico: Apply 4 to 8 lbs. per acre as a broadcast spray prior to weed emergence after planting or after harvesting plant crop (for ratoon crop). A second and third application of 2 to 4 lbs. per acre may be made as a broadcast spray over emerged cane or by directed spray inter-row.

If weeds are emerged, add a surfactant (such as Surfactant WK, "Osamul" 95 or "Sterox" SK) to the spray at the rate of 1 to 2 qts. per 100 gals. and apply as a directed spray. DO NOT SPRAY OVER TOP OF CANE.

Do not apply more than 3 treatments nor more than 10 lbs. (Puerto Rico) or 12 lbs. (Hawaii) total per acre between planting (or ratooning) and harvest. Treated areas may be planted to sugarcane or pineapple one year after last application.

Louisiana: Use on plant cane seeded on fallowed ground. Make a single application of 3 to 3½ lbs. per acre at either of the following times. **Fall Treatment** (August through October)—Treat a 2 ft. band over the row after planting of cane, but before weeds or cane emerge. **Spring Treatment** (January through April)—if shaving and off barring are practiced, treat a 2 ft. band over the row before weeds or cane emerge.

WHEAT, WINTER (Drill-Planted): Crop injury may result where severe winter stress, disease or insect damage follows application, and also from failure to observe the following: Do not use on sand or loamy sand soils, nor on gravelly or sandy loams low in organic matter (less than 1%), nor on thinly covered or exposed sub-soil areas (clay knobs); do not treat wheat planted less than 1" deep; do not treat wheat where winter climatic conditions have caused "heaving" of plants; do not treat wheat plants lacking in vigor due to poor emergence, insect damage, disease, high alkalinity or other causes; do not apply after wheat has reached the "boot" stage of maturity; do not use with other pesticides (except as noted), surfactants, or nitrogen solution. Do not replant treated areas to any other crop within 1 year after last treatment (except as noted) as injury to subsequent crops may result.

Idaho, Oregon and Washington—East of Cascade Range:

Areas Where Average Annual Rainfall Exceeds 16 Inches: Make a single application of 1 to 1½ lbs. per acre. **Fall Treatment:** For early fall-planted wheat (seeded before September 10), apply 3 to 6 weeks after planting but before weeds are 3" to 4" tall. Treatment after October 1 has generally given best results. Application should not be made after soil freezes in the fall. Wheat planted in late October should not be treated until the following spring. **Spring Treatment:** Apply as soon as wheat starts to grow in the spring. Treatment made prior to April 10 will usually give good results provided weed growth is less than 4" tall. Application later than May 1 may give poor results.

Alternatively, make a single application of ½ to 1 lb. "Karmex" plus ¼ lb. bromoxynil per acre as a tank mixture, either in the fall after wheat has emerged but before soil freezes or in the spring as soon as soil thaws; apply before weeds are 2" tall or across.

Areas Where Average Annual Rainfall is 10 to 16 Inches: After wheat is planted in the fall, make a single application of 1 to 1½ lbs. per acre when sufficient moisture is available to germinate wheat seed. Apply before soil freezes and before weeds are 2" tall. Application later than March 1 may give poor results.

Note—If fall-planted wheat fails to grow due to winter kill or adverse growing conditions after fall treatment, only fields treated before November 1 may be replanted to spring wheat. Spring wheat should not be planted before April 1, and only after deep discing and plowing to a depth of 4" to 6" prior to planting. Do not re-treat field with a second application during the same crop year as injury to the crop may result.

Oregon and Washington—West of Cascade Range: Make a single application of 1½ to 2 lbs. per acre as

Western Oregon and Western Washington—Blueberries, Caneberries and Gooseberries: Use same schedule as recommended for Calif.

CITRUS: Use only under trees established in the grove for at least 1 year. Time application as indicated for specific areas, except application may be made any time of the year where sprinkler or flood irrigation can be timed to activate the herbicide. Established perennial weeds require other special control procedures. Do not apply under citrus trees that have been subjected to freezing within 6 months.

Arizona (except Yuma area) and California (except Imperial and Coachella Valleys)—Oranges, Lemons and Grapefruit: Apply 3 to 4 lbs. per acre shortly after grove has been laid-up in final form (non-tillage program) in late fall or early winter. Alternatively, apply 2 lbs. per acre in October or November and repeat at the same rate in March or April. Subsequent annual applications of 2 to 3 lbs. per acre will usually give adequate weed control.

Florida—Oranges, Grapefruit, Tangelos and Tangerines: Make a single application of 4 to 8 lbs. per acre, or apply 3 to 4 lbs. per acre followed by the same rate 4 to 6 months later. On bearing citrus, apply any time when seasonal rains are expected; on non-bearing trees, apply when winter banks are pulled down.

For control of guineagrass, loosestrife, maidencane, paragrass, primrose willow and seamyrtle in ditches adjacent to citrus groves, use 1 lb. per 1000 sq. ft. (40 lbs. per acre) in sufficient water (min. 4 gals. per 1000 sq. ft.) to provide thorough and uniform coverage. Apply in the spring before weed growth starts or after removal of vegetation. Repeat treatment on a spot basis to control hard-to-kill species such as guineagrass. In bedded groves, do not treat water furrows between the beds as injury to the trees may result.

Texas—Oranges and Grapefruit: Apply 2 to 4 lbs. per acre for annual weeds; use 4 to 6 lbs. per acre for control of Johnsongrass seedlings. Best results accompany application in the spring; well established weeds should be eliminated by cultivation prior to treatment.

GRAPES: Apply only to established vineyards (at least 3 years old) as a band treatment to grape rows. Do not apply to vines with trunks less than 1½" in diameter as injury may result. On soils low in clay and organic matter (1 to 2%), severe plant injury may result if unusually heavy rains follow treatment and this risk must be assumed by the user.

East of the Rocky Mountains: On soils low in clay or organic matter (1 to 2%), apply 2 to 3 lbs. per acre; on soils high in clay or organic matter, apply 3 to 6 lbs. per acre. Apply in the spring just prior to germination and growth of annual weeds.

West of the Rocky Mountains: Apply in December, January or February. For initial treatment, apply 3 to 4 lbs. per acre; subsequent annual applications of 2 lbs. per acre will usually give adequate weed control. Alternatively, apply 2 lbs. per acre in October or November and repeat at same rate in March or April.

New York and Pennsylvania—Perennial Grasses: Use only in established vineyards (at least 4 years old) for spot control of perennial grasses such as orchardgrass, quackgrass and ryegrass. Apply in the spring as a band treatment to ridged soil (2" to 4" high) under the trellis at the rate of 8 to 12 lbs. per acre. Band width should not exceed 30". Do not apply more than once every 4 years. Use only on heavy soils such as loams, silt loams, clay loams. Do not use in areas where grape roots are shallow or exposed because of high bedrock, poor drainage, or erosion as injury to grapes may result.

MACADAMIA NUTS—Hawaii: Use only under trees established in the orchard for at least 1 year. Apply 2 to 6 lbs. per acre immediately after harvest, preferably before weeds emerge; if weeds have emerged, add 1 pt. Surfactant WK per 25 gals. of spray. Re-treat as needed but do not exceed 10 lbs. per acre per year.

OLIVES—California: Use only under trees established in the grove for at least 1 year. Apply 2 lbs. per acre after grove has been laid-up in final form in late October or November; repeat at same rate in March or April. Remove weed growth prior to treatment.

PAPAYAS: Use only under trees established in the orchard for at least 1 year. Apply 2½ to 5 lbs. per acre, preferably before weeds emerge; if weeds have emerged, add 1 pt. Surfactant WK per 25 gals. of spray.

PEACHES—Use "Karmex" alone, or apply as a tank mixture with "Sinbar".

"Karmex" Alone—Use only under trees established in the orchard for at least 3 years. Apply 2 to 5 lbs. per acre in the early spring before weeds emerge or during the early seedling stage of weed growth. Do not apply within 3 months of harvest; in the Far West, do not apply within 8 months of harvest.

"Karmex" + "Sinbar"—Use only under trees established in the orchard for at least 2 years. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth.

Soil Texture	Lbs. Product Per Acre	
	1 to 2% Organic Matter "Karmex" + "Sinbar"	More Than 2% Organic Matter "Karmex" + "Sinbar"
Sandy loam	1 + 1	1½ + 1½
Loam, silt loam, silt	1½ + 1½	2 + 2
Clay loam, clay	2 + 2	2 + 2

Where crop is grown under furrow irrigation or under raised-berm flood irrigation (trees 4" to 6" above waterline), apply only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows, nor trees grown under flat flood or basin irrigation, as injury to trees may result. Where complete weed control to harvest is desired, additional weed control measures may be required during the growing season.

PEARS: Use only under trees established in the orchard for at least 1 year; do not treat varieties grafted on full-dwarf root stocks. Apply 4 lbs. per acre in the spring (March through May). In the Far West, treatment may be made in winter (December through February), or apply 2 lbs. per acre as a postharvest treatment followed by 2 lbs. in the spring.

PECANS: Use only under trees established in the grove for at least 3 years. Apply 2 to 4 lbs. per acre in spring or early summer. Do not use on soils with less than ½% organic matter.

PINEAPPLE—Hawaii: Apply 4 to 8 lbs. per acre as a broadcast spray just before or immediately after planting but prior to weed emergence. Use 4 lbs. per acre after harvesting plant crop (for ratoon crop). For plant crop only, a second and third broadcast or interspace application may be made prior to differentiation at the rate of 2 lbs. per acre at intervals of not less than 2 months. Additional applications to plant crop may be made as needed to interspace only using 2 lbs. per acre. Do not apply more than 3 broadcast sprays (maximum 12 lbs. per acre) prior to differentiation nor more than 16 lbs. total per acre per plant crop. Treated areas may be planted to pineapple or sugarcane 1 year after last application.

WALNUTS (English)—California: Use only under trees established in the orchard for at least 1 year. As an initial treatment, apply 3 to 5 lbs. per acre after the orchard has been laid-up in final form (non-tillage program) in late fall or early winter; re-treat annually with 2 to 3 lbs. per acre. Alternatively, apply 2 lbs. per acre in October or November and repeat at same rate in March or April.

● ORNAMENTAL CROPS
(See Soil Limitations)