

Incorporation: Incorporate Treflan HFP thoroughly with a disc set to cut 4 to 6 inches deep and operate 4 to 6 mph. Two incorporation passes are necessary, with a second pass in a different direction from the first.

Cultivation: Some johnsongrass plants will escape. Timely cultivations are necessary to obtain commercially acceptable control. Commercially acceptable control cannot be obtained with only a single year use of Treflan HFP.

Precautions: If treated grapes and orchards are diverted to other crop uses, then in the next cropping season plant only those crops for which Treflan HFP has been registered as a preplant incorporated treatment.

Restrictions:

- Do not use the 4 pint rate on new plantings or crop injury may result.
- Do not interplant orchards or grapes with other crops.

Bindweed Control in California

Treflan HFP can be applied using a specially equipped spray blade for the control of field bindweed in grapes and in plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine, and walnut trees.

Soil Preparation: Destroy existing weeds with soil tillage before applying Treflan HFP to prevent interference with operation of the spray blade.

Equipment: Application requires a spray blade capable of operation at 4 to 6 inches below the soil surface. Equip the blade with nozzles located under the blade and directed so as to allow spray to be trapped in a thin layer as the blade is pulled through the soil. Use a nozzle spacing sufficient to insure application of a uniform horizontal layer.

Application: Apply Treflan HFP in 40 to 80 gallons of water per acre. Operate blade at a depth of 4 to 6 inches.

Broadcast Application Rates per Acre

Soil Texture	Treflan HFP (pints)
all soil textures	4.0

Precautions: Some soils may develop cracks as they dry after rainfall or irrigation. Field bindweed may emerge if the cracks extend through the layer of Treflan HFP. Prevent or eliminate cracks by shallow discing or other tillage. Avoid deep tillage which disturbs the subsurface layer. Cultivation or tillage also aids the control of germinating seeds.

Chemigation in Established Plantings of Tree and Vine Crops

Treflan HFP may be applied through sprinkler irrigation systems for weed control in certain fruit and nut orchards or vineyards. Follow all label instructions for chemigation in the Product Information section of this label before applying.

Application Instructions

- Apply Treflan HFP at a rate of 2.0 to 4.0 pints per broadcast acre.
- Total chemigation period for Treflan HFP should not exceed 4 hours.
- Application of Treflan HFP through irrigation systems should be used as a supplemental weed control practice.
- Do not apply when wind speed favor drift beyond the area intended for treatment.

- Calibration and distribution may be more accurately achieved by injecting a larger volume of a more dilute solution. If desired, dilute Treflan HFP with water prior to injection and mix thoroughly. During chemigation, maintain agitation in the supply tank at all times.
- Sprinkler systems should be calibrated to deliver a volume of 4-50 gallons per hour per emitter.
- Inject Treflan HFP into the irrigation system during the middle of the irrigation cycle. The application interval should be such that at one period of time during the injection, the first and last emitters in the system are simultaneously emitting water containing Treflan HFP. After application is complete, flush equipment with clean water and then continue to irrigate for one to two hours.

Restrictions:

- Do not apply to vineyards within 60 days of harvest.
- Do not allow treated irrigation water to contact the fruit or foliage.
- To prevent ground water contamination, follow all irrigation system requirements.

Chemigation System Calibration (Sample Calculations)

A. Broadcast Application:

- Assume, in this example, 20 acres are to be covered by a chemigation treatment.
- Product required, assuming a rate of 4.0 pints/acre, is 80 pints
(20 acres x 4.0 pt/acre = 80 pints = 10 gallons)
- Inject 10 gallons of Treflan HFP into the irrigation system over a time period not to exceed 4 hours.

B. Non-Broadcast Application:

- Calculation of use rate is based on wetted area around each emitter or sprinkler head.
- Treated area per emitter = A ($A = 3.14 \times \text{radius} \times \text{radius}$)
Example: If the average distance from the emitter to the perimeter of the wetted area = 36 inches, then: $A = 3.14 \times 36" \times 36" = 4069.4$ square inches

- Area in square feet wetted in each = B

$$B = \frac{A \times \text{Emitters/acre}}{144}$$

Example: If there are 200 emitters per acre, then:

$$B = \frac{4069.4 \times 200}{144} = 5651.9 \text{ square feet}$$

- Total area in square feet wetted by system = C

$$C = B \times \text{acres covered by the irrigation system}$$

Example: If the system covers 20 acres, then:

$$C = 5651.9 \text{ square feet} \times 20 = 113,038 \text{ square feet}$$

- Total area, in acres, wetted by system = D

$$D = \frac{C}{43,560} = \frac{113,038}{43,560} = 2.595 \text{ acres}$$

- The amount of Treflan HFP to be injected into the irrigation system = D x rate per acre

Example: If the desired rate is 4.0 pints/acre, then:

$$2.595 \times 4.0 = 10.4 \text{ pints of Treflan HFP injected into the irrigation system over a time period not to exceed 4 hours.}$$

Control of Annual Grasses and Broadleaf Weeds in Nursery Stock, Ornamental Trees, Ornamental Woody Shrubs, Ornamental Groundcovers, Roses, Established Flowers, Vegetable Gardens and Under Paved Surfaces

Treflan HFP will not control DNA-resistant green foxtail.

For the uses on this supplemental labeling, do not aerially apply Treflan HFP or apply Treflan HFP through any type of irrigation system.

Ornamentals

Treflan HFP may be used on the following non-bearing, ornamental species:

Common Name	Scientific Name
Woody Shrubs	
andromeda, Japanese	<i>Pieris japonica</i>
arborvitae, American	<i>Thuja occidentalis</i>
azalea	<i>Rhododendron</i> spp.
barberry, Japanese	<i>Berberis thunbergii</i>
barberry, mento	<i>Berberis mentorensis</i>
boxwood, common	<i>Buxus sempervirens</i>
boxwood, harlands	<i>Buxus harlandi</i>
boxwood, littleleaf	<i>Buxus microphylla</i>
camellia, Japanese	<i>Camellia japonica</i>
camellia, sasanqua	<i>Camellia sasanqua</i>
cherrylaurel, American	<i>Prunus caroliniana</i>
cinquefoil	<i>Potentilla</i> spp.
cleyera, Japanese	<i>Cleyera japonica</i>
cotoneaster, cranberry	<i>Cotoneaster apiculata</i>
cotoneaster, zabel	<i>Cotoneaster zabelii</i>
deutzia	<i>Deutzia</i> spp.
elaeanthus, silverberry	<i>Elaeagnus pungens</i>
euonymus, spreading	<i>Euonymus kiautschovica</i>
euonymus, winged	<i>Euonymus alatus</i>
euonymus, wintercreeper	<i>Euonymus fortunei</i>
firethorn	<i>Pyracantha</i> spp.
forsythia	<i>Forsythia</i> spp.
guava, pineapple	<i>Feijoa sellowiana</i>
hawthorn, India	<i>Rhaphiolepis indica</i>
holly	<i>Ilex</i> spp.
honeysuckle	<i>Lonicera</i> spp.
juniper	<i>Juniperus</i> spp.
laurel, mountain	<i>Kalmia latifolia</i>
lilac, common	<i>Syringa vulgaris</i>
mockorange	<i>Philadelphus</i> spp.
pittosporum, Japanese	<i>Pittosporum tobira</i>
privet	<i>Ligustrum</i> spp.
redcedar, eastern	<i>Juniperus virginiana</i>
rhododendron	<i>Rhododendron</i> spp.
spiraea, vanhoutte	<i>Spiraea vanhouttei</i>
viburnum	<i>Viburnum</i> spp.
weigela	<i>Weigela</i> spp.
willow	<i>Salix</i> spp.
yew, anglojap	<i>Taxus media</i>

yew, Japanese
yewpine

Taxus cuspidata
Podocarpus macrophyllus

Trees

almond
apple, crabapple
apricot
ash, white
baldcypress
birch, European white
blackgum
cherry
chestnut, Chinese
cottonwood
dogwood, flowering
dogwood, kousa
Douglas fir
fir, balsam
hemlock, Canada
honey locust
larch, Japanese
locust, black
maple, Norway
maple, red
maple, silver
maple, sugar
oak, pin
oak, red
oak, scarlet
peach
pine, Austrian
pine, eastern white
pine, Japanese black
pine, loblolly
pine, red
pine, Scotch
planetree, London
plum
redbud, eastern
spruce, Colorado
spruce, Norway
spruce, white
sweetgum
sycamore
tuliptree
walnut, black

Prunus dulcis
Malus spp.
Prunus armeniaca
Fraxinus americana
Taxodium distichum
Betula pendula
Nyssa sylvatica
Prunus spp.
Castanea mollissima
Populus deltoides
Cornus florida
Cornus kousa
Pseudotsuga menziesii
Abies balsamea
Tsuga canadensis
Gleditsia triacanthos
Larix kaempferi
Robinia pseudoacacia
Acer platanoides
Acer rubrum
Acer saccharinum
Acer saccharum
Quercus palustris
Quercus rubra
Quercus coccinea
Prunus persica
Pinus nigra
Pinus strobus
Pinus thunbergiana
Pinus taeda
Pinus resinosa
Pinus sylvestris
Platanus acerifolia
Prunus spp.
Cercis canadensis
Picea pungens
Picea abies
Picea glauca
Liquidambar styraciflua
Platanus occidentalis
Liriodendron tulipifera
Juglans nigra

Groundcover Plantings

aaronsbeard
bellflower, adriatic
bellflower, poscharsky
ceanothus
coreopsis
cotoneaster
coyote brush
crown vetch

Hypericum calycinum
Campanula elatines
Campanula poscharskyana
Ceanothus spp.
Coreopsis spp.
Cotoneaster spp.
Baccharis pilularis
Coronilla vana

daisy, trailing African	<i>Osteospermum fruticosum</i>
fern, asparagus	<i>Asparagus densiflorus</i>
gazania	<i>Gazania</i> spp.
germander	<i>Teucrium chamaedrys</i>
ice plant, largeleaf	<i>Carpobrotus edulis</i>
ivy, Algerian	<i>Hedera canariensis</i>
ivy, English	<i>Hedera helix</i>
lily-of-the-Nile	<i>Agapanthus</i> spp.
lilyturf, bigblue	<i>Liriope muscari</i>
marigold	<i>Tagetes</i> spp.
myoporum	<i>Myoporum laetum</i>
plumbago, dwarf	<i>Ceratostigma plumbaginoides</i>
rockrose	<i>Cistus</i> spp.
rosemary	<i>Rosmarinus officinalis</i>
rupturewort	<i>Herniaria glabra</i>
snow-in-summer	<i>Cerastium tomentosum</i>
speedwell	<i>Veronica</i> spp.
St. Johnswort	<i>Hypericum coris</i>
stoncrop (sedum)	<i>Sedum</i> spp.
strawberry, beach	<i>Fragaria chiloensis</i>
thrift	<i>Armeria maritima</i>
verbena	<i>Verbena</i> spp.
wirevine, creeping	<i>Muehlenbeckia axillaris</i>
yarrow, woolly	<i>Achillea tomentosa</i>
zoysiagrass	<i>Zoysia tenuifolia</i>

Roses and Other Established Flowers

African daisy	marigold
aster (perennial)	marigold, cape
balsam	morningglory
blackeyed susan	nasturtium
calendula	nicotiana
carnation	petunia
centaurea, velvet	phlox
chrysanthemum	pincushion flower
coreopsis	poppy, California
cornflower	portulaca
cosmos	rose
dahlia	salvia
dianthus	shasta daisy
dusty miller	snapdragon
floss flower	snow-on-the-mountain
forget-me-not	stock
four o'clock	sunflower
gaillardia	sweet alyssum
gladiolus	sweet pea
golden glow	sweet sultan
impatiens	sweet william
ixora	vinca
lobelia	yarrow
lupine	zinnia

Incorporation Directions

Apply and incorporate Treflan HFP prior to planting new nursery stock liners, ornamentals, trees and woody shrubs, and gladioli. (Gladioli corms less than 1 inch in diameter may be injured by preplant applications of Treflan HFP.) Treflan HFP may also be applied to established plantings by using a

directed spray to the soil between the rows and beneath the plants.

Broadcast Application Rates for Soil Incorporation Only

Soil Texture	Soil Texture to be Treated	Treflan HFP (pint/acre)
coarse	sand, sandy loam	1 (0.5 lb active)
medium	loam, silt loam, silt	1.5 (0.75 lb active)
fine	clay loam, silty clay, clay	2 (1 lb active)

Treflan HFP is not recommended for use on muck soils.

Ornamental Groundcover Plantings

Application Rate

Apply 1 gallon of Treflan HFP per acre or 3 fl oz per 1000 sq ft of groundcover area.

Field Grown Roses

Apply Treflan HFP as an incorporated treatment at a rate of 2 quarts per acre to field grown roses to control annual weeds listed on the product label. Apply to the soil surface in 5 to 40 gallons of finished spray and incorporate within 24 hours. Use a directed spray if application is made when roses are actively growing. Set incorporation equipment to avoid damage to root systems of established roses. Do not apply more than 2 quarts of Treflan HFP (2 lb active ingredient) per acre per year.

Under Paved Surfaces

Application Directions

Use Treflan HFP only where the soil to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with a grader blade to a depth sufficient to ensure their complete removal. Apply Treflan HFP after the final road bed is established or after the base rock has been added. Do not move soil after applying Treflan HFP; do not apply Treflan HFP to soil where asphalt is to be applied directly on top of the treated soil. Paving should occur as soon as possible after application of Treflan HFP.

Large Areas: Apply Treflan HFP uniformly with a ground sprayer in sufficient water to ensure thorough wetting of the soil surface or penetration of the spray solution through the base rock layer. A minimum of 150 gallons per acre is recommended. Add Treflan HFP to clean water during filling of spray tank. Agitate before spraying.

Small Areas: For treating small areas, a hand sprayer or sprinkling can may be used. Before application determine the amount of water and Treflan HFP necessary to uniformly cover the area to be treated. Shake or stir the spray solution prior to application.

Area Size	Amount of Treflan HFP
small	9 – 12 fl oz/1000 sq ft
large	3 – 4 gal/acre

Vegetable Gardens

Application Directions

Beginning with a clean spray tank, fill the sprayer one-half full with clean water. Add correct quantity of Treflan HFP, close the sprayer and shake well to mix. Finish filling sprayer and shake occasionally to keep Treflan HFP mixed in the tank. Apply Treflan HFP in 1 to 5 gallons of water per 1000 square feet on

a broadcast basis. Spray uniformly over the top of the soil surface to ensure satisfactory weed control.

Crop residues or existing weeds can interfere with the mixing of Treflan HFP into the soil. A manageable level of such residues allows Treflan HFP to be uniformly mixed into the top 2 to 3 inches of soil. If the level of the crop residue is such that this cannot be done, till the soil prior to application.

Soil Texture Guide:

The amount of Treflan HFP applied varies with the soil texture to be treated. A fine textured soil requires more Treflan HFP than a coarse soil. Choose the proper rate for each application based upon the following soil texture group and specific crop recommendations. Do not exceed listed rates.

Soil Texture	Soil Classification
coarse (light)	sands, loamy sands, sandy loams
medium	silt, loam
fine (heavy)	clay loams, silty clay loams, clays, silty clays

Rate Conversion Chart:

Treflan HFP	
Rate per 1000 sq ft (teaspoon)	Rate per acre (pint)
2 1/4	1
3 1/3	1 1/2
4 1/2	2

Small Sprayer Calibration Technique: Small sprayer calibration can be achieved by following these five steps:

1. Fill the sprayer full of clean water.
2. Spray over the area to be treated.
3. When the sprayer is empty, measure the area treated to determine the number of square feet per sprayer load.
4. After calculating the number of square feet per sprayer load, calculate the amount of Treflan HFP needed to treat that size area.
5. Refer to the mixing directions on the product label for Treflan HFP.

Incorporation Directions

Thoroughly mix Treflan HFP into the top 2 to 3 inches of the final seedbed (when the garden is ready for planting) or erratic weed control and/or crop injury may result. Equipment such as a rototiller or rake should be used to mix Treflan HFP to the desired 2 to 3 inch depth.

The machinery used for incorporation should break up large clods and mix Treflan HFP thoroughly with the soil. The more thoroughly Treflan HFP is mixed within the soil, the more consistent the weed control.

Preplant Incorporation: Treflan HFP must be mixed into the top 2 to 3 inches of the final seedbed within 24 hours after application.

Postplant Incorporation: Check specific crop incorporation directions after planting.

Cultivation After Planting

Soil treated with Treflan HFP may be shallow cultivated without reducing the weed control activity of Treflan HFP. Do not cultivate deeper than the treated soil since this may bring untreated soil to the surface and poor weed control may result.

48 Hour Incorporation Delay

(For use only in Texas, Oklahoma and New Mexico)

Treflan HFP herbicide may be applied as a preplant incorporated treatment for weed control in registered crops. The incorporation delay for Treflan HFP is extended from 24 to 48 hours when applied in the states of Texas, Oklahoma and New Mexico. If Treflan HFP is applied to a warm wet soil surface or the wind velocity is 10 mph or greater, variable weed control may result if the first incorporation is delayed more than 24 hours.

Follow soil incorporation procedures recommended on the label for Treflan HFP. Where two incorporation passes are required, the first pass must be accomplished within 48 hours after application. The second incorporation pass may occur anytime before planting.

72 Hour Incorporation Delay (For use only in Arizona and California)

When Treflan HFP herbicide is applied as a preplant incorporated treatment, the first incorporation pass must be accomplished within 24 hours after application. In Arizona and California the incorporation delay has been extended from 24 to 72 hours when applied to dry soils. However, when Treflan HFP is applied to warm soil or if wind velocity is 10 mph or higher, variable weed control may result from delaying the first incorporation beyond 24 hours.

Where two incorporation passes are required, the second incorporation may occur anytime prior to planting. Follow other incorporation directions on the label for Treflan HFP.

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