
VOLUNTEER™

herbicide

TENKÖZ

Active Ingredient	By Wt.
* Clethodim	26.4%
Other Ingredients.....	73.6%
Total.....	100.0%

Contains Petroleum Distillates

* (E)-2-[1-[[[3-chloro-2-propenyl]oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

Contains 2.0 lbs. clethodim per gal.

KEEP OUT OF REACH OF CHILDREN

WARNING – AVISO

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye irritation. Avoid contact with skin. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID

- If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
- If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

NOTE TO PHYSICIANS

Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid, which can cause pneumonitis. If ingested, probable mucosal damage may contraindicate the use of gastric lavage.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves such as Barrier Laminate or Viton \geq 14 mils, shoes plus socks, and protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwater or rinsate.

The use of this product may pose a hazard to the federally designated endangered species of Solano Grass and Wild Rice. Use of this product is prohibited in the following areas where the species are known to exist:

Solano Grass: Solano County, California: the vernal lakes area bounded by the Union Pacific Railroad and Hastings Road to the north, Highway 113 to the east, Highway 12 to the south, and Travis Air Force Base to the west.

Wild Rice: Hays County, Texas.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL AND PAMPHLET. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical-resistant gloves, such as Barrier Laminate or Viton \geq 14 mils, shoes plus socks, and protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift. Do not enter treated areas without protective clothing until sprays have dried.

DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Tenkoz. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Tenkoz shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

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LIMITED WARRANTY

Tenkoz warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and **subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, TENKOZ MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Tenkoz or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

In no event shall Tenkoz or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF TENKOZ OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF TENKOZ OR SELLER, THE REPLACEMENT OF THE PRODUCT.

PROMPT NOTICE OF CLAIM

Tenkoz must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Tenkoz of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Tenkoz and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

CHEMIGATION

May be applied to Onions and Garlic by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or to this crop using any other type of irrigation system.

GENERAL INFORMATION

FOR Soybeans, Cotton, Sugar Beets, Onions (dry bulbs), Garlic, Shallots (dry bulbs), Alfalfa, Peanuts, Dry Beans, Sunflower, Canola*, Flax*, Mustard Seed*, Potato, Sweet Potato, Yam (and other Tuberous⁽¹⁾) and Corm⁽¹⁾ Vegetables), Tomatoes, Peppers (bell and non-bell), Eggplants (and other Fruiting Vegetables), Carrot, Radish, Garden Beet, Horseradish (and other Root Vegetables⁽²⁾), Leaf Lettuce, Broccoli, Cabbage, Cauliflower (and other Head and Stem Brassica Vegetables⁽³⁾), Mustard Greens (and other Leafy Brassica Greens⁽⁴⁾), Spinach, Celery, Rhubarb (and other Leaf Petioles⁽⁵⁾), Cranberry, Strawberry, Squash (including Pumpkins), Cucumber, Melons (including Cantaloupes and Watermelons), Mint, Clover (grown in Idaho, Oregon and Washington only), Non-Bearing Food Crops, Fallow Land (and other non-producing agricultural areas), and Non-Crop or Non-Planted Areas.

* Not for use in California.

- (1) Other tuberous and corm vegetables approved for use with VOLUNTEER™ Herbicide include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible burdock, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, taniar, turmeric and bean yam.
- (2) Other root vegetables approved for use with VOLUNTEER include: burdock, edible; celeriac; chervil, turnip-rooted; chicory; ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.
- (3) Other head and stem brassica vegetables approved include: Chinese broccoli; Brussels sprouts; Chinese (napa) cabbage; Chinese mustard; cavalo broccoli; and kohlrabi.
- (4) Other leafy brassica greens approved for use with VOLUNTEER include: broccoli raab, cabbage, Chinese (bok choy); collards; kale, mustard greens; mustard spinach; rape greens and turnip greens.

⁽⁵⁾ Other leaf petiole crops include: cardoon, Chinese celery, celtuce, Florence fennel, and swiss chard.

VOLUNTEER is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.

VOLUNTEER is a selective postemergence herbicide for control of annual and perennial grasses. VOLUNTEER does not control sedges or broadleaf weeds.

Repeated use of VOLUNTEER (or similar postemergence grass herbicides with the same mode of action) may lead to the selection of naturally occurring biotypes that are resistant to these products in some grass species.

If poor performance occurs and cannot be attributed to adverse weather or applications conditions, a resistant biotype may be present. This is most likely to occur in fields where other control strategies such as crop rotation, mechanical removal, and other classes of herbicides are not used from year to year.

Do not allow VOLUNTEER to come in contact with desirable grass crops such as corn, rice, sorghum, small grains, or turf, as these and other grass crops will be injured or killed.

Minor leaf spotting may occur on treated plants under certain environmental conditions. New foliage is not affected.

Control Symptoms

Treated grass weeds show a reduction in vigor and growth. Early chlorosis/necrosis of younger plant tissue is followed by a progressive collapse of the remaining foliage. Symptoms will generally be observed in 7 to 14 days after application, depending on grass species treated and environmental conditions.

APPLICATION INFORMATION

Timing of Applications

Apply VOLUNTEER postemergence to actively growing grasses according to rate table recommendations. Applications made to grass plants stressed by insufficient moisture, hot or cold temperatures, or to grass plants exceeding recommended growth stages may result in unsatisfactory control. Do not apply under these conditions.

In arid regions where irrigation is used to supplement limited rainfall, VOLUNTEER should be applied as soon as possible after irrigation (within 7 days). In arid regions, a second application of VOLUNTEER will generally provide more effective control of perennial grass weeds than a single application. Make second application to actively growing grass 2 to 3 weeks after emergence of new growth.

Cultivation of treated grasses 7 days prior to or within 7 days after application of VOLUNTEER may reduce weed control. DO NOT APPLY VOLUNTEER if rainfall is expected within one hour, since control may be reduced.

ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE

CROP	ADJUVANT RECOMMENDATIONS
Soybeans, Alfalfa, Dry Bean, Cotton, Peanuts, Sugar Beet, Sunflower, Potatoes	Always use a crop oil concentrate* at 1.0 qt./A by ground or 1% v/v (but not less than 1 pt./A) in the finished spray volume by air. 1 to 2 qts./A of liquid fertilizer (10-34-0, 28%N or 32%N), or an equivalent amount (2.5 to 4.0 lbs./A) of spray grade ammonium sulfate (AMS) may be added to VOLUNTEER applications, in addition to the recommended rate of crop oil concentrate. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Onions (dry bulbs), Garlic, Shallots (dry bulbs), Carrot, Radish, Garden Beet, Horseradish (and other Root Vegetables), Leaf Lettuce, Broccoli, Cabbage, Cauliflower (and other Head and Stem Brassica Vegetables), Mustard Greens (and other Leafy Brassica Greens), Spinach, Celery, Rhubarb (and other Leaf Petioles), Cranberry, Sweet Potatoes, Yams (and other Tuberous and Corm Vegetables), Canola**, Flax**, Mustard Seed**, Tomatoes, Peppers (bell and non-bell), Eggplants (and other Fruiting Vegetables), Strawberry, Squash (including Pumpkins), Cucumber, Melons (including Cantaloupes and Watermelons), Mint and Clover	Always use a crop oil concentrate at 1% v/v in the finished spray volume unless tank mix instructions indicate otherwise. Addition of fertilizer is not recommended for these crops.
Non-Bearing Food Crops	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v). Use of crop oil concentrate is not recommended since it may injure flowers and foliage.

ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE (continued)

CROP	ADJUVANT RECOMMENDATIONS
Fallow Land (and other non-producing agricultural areas)	Always use a crop oil concentrate containing at least 15% emulsifier at 1% v/v (but not less than 1 pt./A) in the finished spray volume.

* Acceptable crop oil concentrates would be those that contain a minimum of 80% oils and 15% emulsifier. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria: be non-phytotoxic, contain only EPA-exempt ingredients, provide good mixing quality and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

**Not for use in California.

Ground Application

Use of sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 5 gals. and a maximum of 40 gals. of spray solution per acre. Under the following conditions a minimum of 10 gals. per acre is required: ultra narrow row cotton, narrow row soybeans, broadleaf herbicide tank mixes, perennial grasses, volunteer corn, drought or stress conditions, heavy grass pressure or when grasses are at or near maximum height. Failure to use a minimum of 10 gals. per acre under these conditions can result in poor coverage and reduced grass control requiring repeat applications. Spray pressures should reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

Applications to onions (dry bulbs), garlic, and shallots (dry bulbs) should be made in a minimum of 20 gals. of spray solution per acre.

Air Application

Use a minimum of 3 gals. of spray solution per acre unless otherwise directed in this label. Increase spray volumes up to 10 gals. as grass or crop foliage becomes dense. For onions (dry bulbs), garlic, or shallots (dry bulbs): When applying by air do not exceed 8 fl. oz./A in a single application. In California, air applications to onions, garlic or shallots should be made in a minimum of 20 gals. of spray solution per acre. In states other than California, air application to onions, garlic, or shallots should be made in a minimum of 10 gals. of spray solution.

NOTE: Crop injury may occur when VOLUNTEER is applied to onions, garlic, or shallots with aerial equipment.

Spot Treatment

When using hand sprayers or high volume sprayers utilizing hand guns,

mix 1/4% to 1/2% (0.33 oz. to 0.65 oz. per gal.) VOLUNTEER and treat to wet vegetation, while not allowing runoff of spray solution. For uses requiring crop oil concentrate, include crop oil concentrate at 1% (1.3 oz. per gal.) by volume. For uses requiring non-ionic surfactant, include non-ionic surfactant at 1/4% (0.33 oz. per gal.) by volume.

NOTE: If VOLUNTEER is applied as a spot treatment, care should be taken to not exceed the maximum rate allowed on a "per acre" basis or crop injury may occur.

CHEMIGATION - ONION (Dry Bulbs) AND GARLIC SPRINKLER IRRIGATION APPLICATION

- Do not apply VOLUNTEER by chemigation in the states of Idaho, Montana, Oregon and Washington.

Apply VOLUNTEER at the high rate recommended for annual grasses (16 fl. oz. per acre) when the grass height is at the low end of the range (application to larger grasses may not provide adequate control). Add a crop oil concentrate containing at least 15% emulsifier at 1 quart per acre.

Apply VOLUNTEER in 0.1 to 0.2 acre-inch of water either at the end of a regular irrigation set or as a separate application not associated with a regular irrigation using the least amount of water that provides proper distribution and coverage. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Use a metering device to inject the VOLUNTEER into the irrigation water at a constant flow. Constant agitation must be maintained in the chemical supply tank during the entire period of herbicide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period.

It is not recommended that VOLUNTEER be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Use Precautions

1. Apply this product only through sprinkler irrigation systems including

center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.
3. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

RESTRICTIONS AND LIMITATIONS GENERAL

Do not apply if rain is expected within 1 hour of application as control may be unsatisfactory.

Do not apply a postemergence broadleaf herbicide within one day following application of VOLUNTEER or reduced grass control may result. VOLUNTEER is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.

For canola*, clover, flax*, mustard seed* and radish crops, do not apply more than 16 fl. oz. of VOLUNTEER (0.25 lb. ai) per acre per season. For all other crops, do not apply more than 32 fl. oz. of VOLUNTEER (0.50 lb. ai) per season. Application on Long Island, New York, is restricted to no more than 16 fl. oz. of VOLUNTEER (0.25 lb. ai) per acre per season.

Do not apply more than 8 fl. oz./A of VOLUNTEER **per application** to the following crops: garden beets, carrots, radish, (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head & stem brassica vegetables), celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax* and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola*, or mustard seed*. **Exceeding these recommendations may result in unacceptable crop injury.**

Do not apply under conditions of stress. Applying VOLUNTEER under conditions that do not promote active grass growth will reduce herbicide effectiveness. These conditions include drought, excessive water, extremes in temperature, low humidity and grasses either partially controlled or stunted from prior pesticide applications. Grasses under these kinds of stressful conditions will not absorb and translocate VOLUNTEER effectively, and will be less susceptible to herbicide activity.

Optimal perennial grass control can be obtained if rhizomes or stolons are cut up by preplant tillage practices (discing, plowing, etc.) to stimulate maximum emergence of grass shoots. Cultural practices, such as continuous no-tillage in which the perennial grass rhizomes or stolons are not cut up, result in a very staggered, non-uniform weed emergence. Due to this non-uniform weed emergence, no fewer than 2 VOLUNTEER applications per season per year are recommended at the appropriate weed-growth stage rate under continuous no-till conditions.

Grass crops such as corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to VOLUNTEER.

While all the vegetable crops on this label have been tested and are tolerant to VOLUNTEER, not all specialty varieties of these crops have been tested. It is advised that, before applying VOLUNTEER to specialty varieties of vegetable crops on this label, crop tolerance be investigated first using a small section of the field. It is possible that injury symptoms can occur. Symptoms may appear as leaf speckling or stunting.

Always read and follow the restrictions and limitations for all products

whether used alone or in a tank mix. The most restrictive labeling of any product used applies in tank mixtures, including all crop rotational and other crop restrictions.

Tank mixes of VOLUNTEER and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of VOLUNTEER may be necessary.

* Not for use in California.

AVOID SPRAY DRIFT

Do not allow spray from ground or aerial equipment to drift onto adjacent land or crops. When drift may be a problem, do everything possible to reduce spray drift, including:

- Do not spray if wind speeds are or become excessive.
- Do not spray if wind speed is 10 MPH or greater. If sensitive crops or plants are downwind, extreme caution must be used under all conditions.
- Do not spray if winds are gusty.
- Use extreme caution when conditions are favorable for drift (high temperatures, drought, low relative humidity), especially when sensitive plants are located nearby.
- Do not apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.
- Further reductions in drift can be obtained by:
 1. Using large droplet size sprays. Do not use nozzles that produce small droplets. Orient nozzles downward and slightly backward as needed to reduce drift for ground applications.
 2. Orienting nozzles straight back with the windstream, using straight stream orifices for aerial applications.
Use the lowest number of nozzles practical with the largest possible orifice size to obtain the minimum 3 GPA volume. Application height and boom length should be set according to manufacturer's instructions to minimize drift.
 3. Increasing the volume of spray mixture (for example a minimum of 10 GPA for ground applications) by using higher flow rate nozzles. Using lower pressure with the appropriate nozzle to obtain higher volumes will also reduce drift.
 4. Applying as close to target plants as practical while maintaining a good spray pattern for adequate coverage.

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.

CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Alfalfa including: Sainfoin Holy Clover Birdsfoot trefoil ⁽³⁾	15 days before grazing, feeding, or harvesting (cutting) for forage or hay	6-16 fl. oz. ⁽⁴⁾	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	Do not plant rotational crops until 30 days after application of VOLUNTEER ⁽⁶⁾ . The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Beans, Dry	30 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Beet, Garden	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Carrot	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Canola (Not for use in California)	70 days	4-6 fl. oz.	1% v/v in the finished spray volume.	Do not apply after crop has begun bolting. Crop injury may occur when VOLUNTEER is applied during the bloom period. Do not exceed 16 fl. oz./A in a season.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Celery including: Cardoon Chinese celery Celtauce Florence fennel Swiss chard	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Clover	15 days before grazing, feeding, or harvesting (cutting) for forage or hay	6-16 fl. oz.	1% v/v in the finished spray volume.	For use on clover grown in the states of Idaho, Oregon and Washington only. Do not exceed 16 fl. oz./A in a season.
Cotton	60 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ^(b) .	Do not graze treated fields or feed treated forage or hay to livestock. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Cranberry	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. Do not apply between the "hook" stage and full fruit set. For repeat applications make on a minimum of a 14 day interval.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Cucurbits , including: Cantaloupes (all) Cucumber Gherkin Honeydew Melon Muskmelons (all) Pumpkin Squash (all) Watermelon	14 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Fallow Land (and other non-producing agricultural areas) Non-Crop or Non-Planted Areas	N/A	6-16 fl. oz.	1% v/v (but not less than 1 pt./A) in the finished spray volume using a crop oil concentrate containing at least 15% emulsifier.	Do not plant any crop for 30 days after application unless clethodim is registered for use in that crop.
Flax (Not for use in California)	60 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Apply prior to bloom. Crop injury may occur when VOLUNTEER is applied during the bloom period. Do not exceed 16 fl. oz./A in a season.
Fruiting Vegetable (except Tomato), including: Eggplant Groundcherry Pepino Peppers (all) Tomatillo	20 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Head & Stem Brassica Vegetables , including: Broccoli Cabbage Cauliflower Brussels sprouts	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Leafy Brassica Greens , including: Broccoli Raab Cabbage, Chinese (Bok Choy) Collards Kale Mustard Greens Mustard Spinach Rape Greens Turnip Greens	14 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Leaf Lettuce	14 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Mint	21 days	6-16 fl. oz. ⁽⁴⁾	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air.	Do not apply more than 16 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.

(continued)

CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Mustard Seed (Not for use in California)	75 days	4-6 fl. oz.	1% v/v in the finished spray volume.	Do not apply after crop has begun bolting. Crop injury may occur when VOLUNTEER is applied during the bloom period. Do not exceed 16 fl. oz./A in a season.
Non-Bearing Food Crops	N/A	6-8 fl. oz. ⁽⁸⁾	Use of crop oil concentrate is not recommended since it may injure flowers and foliage. See Special Use Instructions.	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v). Sugar maples cannot be tapped for syrup within one year of VOLUNTEER application.
Onions (Dry Bulbs Only) Garlic Shallots (Dry Bulbs Only)	45 days	6-16 fl. oz. ^{(7), (8)}	1% v/v in the finished spray volume.	Minimum of 20 gals. per acre spray volume by ground in entire U.S. Minimum of 20 gals. per acre spray volume by air in California ⁽⁹⁾ . In states other than California, air applications to onions, garlic or shallots should be made in a minimum of 10 gals./A.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Peanut	40 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Potato	30 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Radish	15 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. Do not apply more than 16 fl. oz./A in a season. For repeat applications make on a minimum of a 14 day interval.
Root Vegetables (except Radish), including: Chicory Ginseng Horseradish Turnip	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Rhubarb	30 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Soybean	60 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	Do not graze treated fields or feed treated forage or hay to livestock. Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Spinach	14 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Strawberry	4 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. For repeat applications make on a minimum of a 14 day interval.
Sugar Beet	40 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	Refer to appropriate Table for reduced rate recommendations for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.

(continued)

CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR VOLUNTEER (continued)

Crops ⁽¹⁾	Minimum Time From Application to Harvest (PHI)	Use Rates Per Acre	Crop Oil Concentrate Rates Per Acre ⁽²⁾	Special Use Instructions
Sunflower	70 days	6-16 fl. oz.	1 qt. by ground or 1% v/v (but not less than 1 pt./A) by air ⁽⁵⁾ .	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Sweet Potato, Yam and other tuberous and corm vegetables (except Potato), including: Artichoke, Chinese Jerusalem Cassava, Bitter Sweet Ginger	30 days	6-16 fl. oz.	1% v/v in the finished spray volume.	The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Tomato	20 days	6-16 fl. oz.	1% v/v in the finished spray volume.	—

N/A= Not Applicable.

- ⁽¹⁾ VOLUNTEER is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.
- ⁽²⁾ Acceptable crop oil concentrates would be those which contain a minimum of 80% oils and 15% emulsifier. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria: be non-phytotoxic, contain only EPA-exempt ingredients, provide good mixing quality and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. See the Addition of Adjuvant and Crop Oil Concentrate section for further information.

- ⁽³⁾ VOLUNTEER may be applied to seedling or established alfalfa grown for seed, hay, silage, green chop, or direct grazing.
- ⁽⁴⁾ For weed control in established alfalfa and mint, the minimum use rate is 10 fl. oz./A.
- ⁽⁵⁾ 1 to 2 qts./A of liquid fertilizer (10-34-0, 28%N or 32%N), or an equivalent amount (2.5 to 4.0 lbs./A) of spray grade ammonium sulfate (AMS) may be added to VOLUNTEER applications, in addition to the recommended rate of crop oil concentrate.
- ⁽⁶⁾ Do not apply VOLUNTEER and 2,4-DB as a tank mix to alfalfa unless the 60 day feeding, grazing, and harvesting restriction on the 2,4-DB label can be observed.
- ⁽⁷⁾ For ground applications to garlic or shallots, do not exceed 8 fl. oz./A in a single application. For air applications to onion, garlic or shallots, do not exceed 8 fl. oz./A in a single application. For garlic and shallots, do not exceed 2 applications per season. In CA for air application to onions, do not exceed 2 applications per season.
- ⁽⁸⁾ If VOLUNTEER is applied as a spot treatment to onions, garlic or shallots, or non-bearing food crops, care should be taken to not exceed the maximum rate allowed on a "per acre" basis or crop injury may occur.
- ⁽⁹⁾ In California, do not apply VOLUNTEER to onions, garlic, or shallots until the crop has at least two full leaves. In California, 14 day spray intervals are recommended between the application of VOLUNTEER and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.

DIRECTIONS FOR USE IN SOYBEANS, COTTON, SUGAR BEETS, ONIONS (Dry Bulbs), GARLIC, SHALLOTS (Dry Bulbs), ALFALFA, PEANUTS, DRY BEANS, SUNFLOWER, CANTOLA*, FLAX*, MUSTARD SEED*, POTATO, SWEET POTATO, YAM (and other Tuberous⁽¹⁾ and Corm⁽¹⁾ Vegetables), TOMATOES, PEPPERS (bell and non-bell), EGGPLANTS (and other Fruiting Vegetables), CARROT, RADISH, GARDEN BEET, HORSERADISH (and other Root Vegetables⁽²⁾), LEAF LETTUCE, BROCCOLI, CABBAGE, CAULIFLOWER (and other Head and Stem Brassica Vegetables⁽³⁾), MUSTARD GREENS (and other Leafy Brassica Greens⁽⁴⁾), SPINACH, CELERY, RHUBARB (and other Leaf Petioles⁽⁵⁾), CRANBERRY, STRAWBERRY, SQUASH (including PUMPKINS), CUCUMBER, MELONS (including CANTALOUPE and WATERMELONS), MINT, AND CLOVER (grown in Idaho, Oregon, and Washington only), NON-BEARING FOOD CROPS, AND NON-CROP OR NON-PLANTED AREAS.

* Not for use in California.

- ⁽¹⁾ Other tuberous and corm vegetables approved for use with VOLUN-

TEER include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible burdock, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, tanier, turmeric and bean yam.

- (2) Other root vegetables approved for use with VOLUNTEER include: burdock, edible; celeriac; chervil, turnip-rooted; chicory; ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.
- (3) Other head and stem brassica vegetables approved include: Chinese broccoli; Brussels sprouts; Chinese (napa) cabbage; Chinese mustard; cavalo broccoli; and kohlrabi.
- (4) Other leafy brassica greens approved for use with VOLUNTEER include: broccoli raab, cabbage, Chinese (bok choy); collards; kale, mustard greens; mustard spinach; rape greens and turnip greens.
- (5) Other leaf petiole crops include: cardoon, Chinese celery, celuce, Florence fennel, and swiss chard.

IMPORTANT

Plant tolerance to VOLUNTEER at labeled rates has been found to be acceptable for the indicated genera and species listed below. Due to variability within species, crop growth stage, environmental conditions, and application techniques, it is recommended that the user determine if the herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of VOLUNTEER have investigated the safety factor to plants not listed on the label.

NON-BEARING FOOD CROPS

VOLUNTEER SHOULD NOT BE APPLIED TO NON-BEARING FRUIT OR NUT CROPS WHICH ARE GROWN FOR ROOT STOCK.

Crop injury to non-bearing fruit and nut crops can occur if VOLUNTEER is improperly applied. VOLUNTEER should not be applied directly over the top of these plant types. Instead spray should be directed at the base of the plant where grassy weeds are growing near the ground.

Non-bearing fruit and nut crops are plants which will not bear fruit or nuts for at least one year following VOLUNTEER application.

COMMON NAME

Apples
Berries

Cherry, Sweet
Citrus Fruits
Grapes
Olives
Peach
Pears
Prunes
Stone Fruits
Tree Nuts
Almond
Filbert
Pecan
Pistachio
Walnut

SCIENTIFIC NAME

Malus spp.
Vaccinium spp.
Rubus spp.
Prunus avium
Citrus spp.
Vitis spp.
Olea spp.
Prunus persica
Pyrus communis
Prunus spp.
Prunus spp.

Prunus triloba
Corylus maxima
Carya illinoensis
Pistacia vera
Juglans spp.

NON-CROP OR NON-PLANTED AREAS

The following areas are considered non-crop or non-planted areas: Rights-of-way including railroads, highways, roads, dividers, medians, pipelines, public utility lines, pumping stations, transformer stations and substations. Around airports, electric utilities, commercial buildings, manufacturing plants, storage yards, rail yards, fence lines, parkways, and post-harvest croplands.

RECOMMENDATIONS FOR ANNUAL GRASSES (EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT)

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the high rate under heavy grass pressure and/or when grasses are at maximum height.
- Do not apply more than 8 fl. oz./A of VOLUNTEER per application to the following crops: garden beets, carrots, radish (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head and stem brassica vegetables), mustard greens (and other leafy brassica greens), spinach, celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax* and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola*, or mustard seed*.

* Not for use in California.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL. OZ./ ACRE	HIGH RATE ⁽⁴⁾
Barnyardgrass	<i>Echinochloa crus-galli</i>	2-8	6	8
Broadleaf Signalgrass	<i>Bracharia platyphylla</i>	2-6	6	8
Brome				
California	<i>Bromus carinatus</i>	2-6	6	8
Cheat	<i>Bromus secalinus</i>	2-6	6	8
Downy	<i>Bromus tectorum</i>	2-6	6	8
Ripgut	<i>Bromus diandrus</i>	2-6	6	8
Canarygrass	<i>Phalaris canariensis</i>	1-4	6	8
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2-6**	6	8
Large	<i>Digitaria sanguinalis</i>	2-6**	6	8
Smooth	<i>Digitaria ischaemum</i>	2-6**	6	8
Southern	<i>Digitaria ciliaris</i>	2-6**	6	8
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2-6**	6	8
Fall Panicum	<i>Panicum dichotomiflorum</i>	2-8	6	8
Field Sandbur	<i>Cenchrus incertus</i>	2-6	6	8
Foxtail				
Giant	<i>Setaria faberi</i>	2-12	6	8
Green	<i>Setaria viridis</i>	2-8	6	8
Yellow	<i>Setaria glauca</i>	2-8	6	8
Goosegrass	<i>Eleusine indica</i>	2-6**	6	8

(continued)

* Generally occurs between 3-leaf stage and tillering.

** Length of lateral growth.

⁽⁴⁾ Rates higher than 8 fl. oz./A may be applied in certain geographic areas, cropping situations, or environmental conditions, where experience has shown that higher rates are needed for satisfactory control of annual grasses. In these situations, rates from 8 to 16 fl. oz./A may be applied. Do not apply more than 8 fl. oz./A of VOLUNTEER per application to the following crops: garden beets, carrots, radish (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head and stem brassica vegetables), celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax[†] and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola[†], or mustard seed[†].

[†] Not for use in California.

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GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL. OZ./ ACRE	HIGH RATE ⁽⁴⁾
Itchgrass	<i>Rottboellia cochinchinensis</i>	2-6	6	8
Junglerice	<i>Echinochloa colona</i>	2-6	6	8
Lovegrass (Stinkgrass)	<i>Eragrostis cilianensis</i>	2-6	6	8
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1-4	6	8
Red Rice	<i>Oryza sativa</i>	1-3	6	8
Ryegrass				
Hardy	<i>Lolium remotum</i>	2-6	6	8
Italian	<i>Lolium multiflorum</i>	2-6	6	8
Seedling Johnsongrass	<i>Sorghum halepense</i>	4-10	6	8
Shattercane	<i>Sorghum bicolor</i>	6-18	6	8
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2-6	6	8
Sprangletop				
Amazon	<i>Leptochloa panicoides</i>	2-6	6	8
Bearded	<i>Leptochloa fascicularis</i>	2-6	6	8
Mexican	<i>Leptochloa uninervia</i>	2-6	6	8
Red	<i>Leptochloa filiformis</i>	2-6	6	8
Texas Panicum	<i>Panicum texanum</i>	2-6	6	8

(continued)

* Generally occurs between 3-leaf stage and tillering.

⁽⁴⁾ Rates higher than 8 fl. oz./A may be applied in certain geographic areas, cropping situations, or environmental conditions, where experience has shown that higher rates are needed for satisfactory control of annual grasses. In these situations, rates from 8 to 16 fl. oz./A may be applied. Do not apply more than 8 fl. oz./A of VOLUNTEER per application to the following crops: garden beets, carrots, radish (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head and stem brassica vegetables), celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax[†] and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola[†], or mustard seed[†].

[†] Not for use in California.

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GRASS SPECIES	SCIENTIFIC NAME	WEED	RATE	HIGH RATE ⁽⁴⁾
		HEIGHT* (inches)	FL. OZ./ ACRE	
Volunteer Cereals ⁽³⁾				
Barley	<i>Hordeum vulgare</i>	2-6	6	8
Oats	<i>Avena sativa</i>	2-6	6	8
Rye	<i>Secale cereale</i>	2-6	6	8
Wheat	<i>Triticum aestivum</i>	2-6	6	8
Volunteer Corn ⁽²⁾	<i>Zea mays</i>	4-12	4	6
Volunteer Corn (S.R.) ⁽¹⁾	<i>Zea mays</i>	4-12	8	(suppression only)
Volunteer Corn ⁽²⁾	<i>Zea mays</i>	12-24	6	8
Volunteer Grain				
Sorghum	<i>Sorghum bicolor</i>	8-12	6	8
Wild Oats	<i>Avena fatua</i>	2-6	6	8
Wild Proso Millet	<i>Panicum miliaceum</i>	2-10	6	8
Witchgrass	<i>Panicum capillare</i>	2-8	6	8
Woolly Cupgrass	<i>Eriochloa villosa</i>	2-8	6	8

* Generally occurs between 3-leaf stage and tillering.

** Length of lateral growth.

⁽¹⁾ Sethoxydim resistant volunteer corn.

⁽²⁾ Includes Roundup Ready, Liberty Link and Imi-Corn volunteer corn.

⁽³⁾ When the cereal grain crop (such as wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment, the minimum VOLUNTEER use rate for control is 8 fl. oz./A.

⁽⁴⁾ Rates higher than 8 fl. oz./A may be applied in certain geographic areas, cropping situations, or environmental conditions, where experience has shown that higher rates are needed for satisfactory control of annual grasses. In these situations, rates from 8 to 16 fl. oz./A may be applied. Do not apply more than 8 fl. oz./A of VOLUNTEER per application to the following crops: garden beets, carrots, radish (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head and stem brassica vegetables), celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax[†] and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola[†], or mustard seed[†].

[†] Not for use in California.

RECOMMENDATIONS FOR ANNUAL & PERENNIAL GRASS CONTROL IN ESTABLISHED ALFALFA AND MINT WITH VOLUNTEER

GRASS SPECIES	WEED STAGE	RATE FL. OZ./ACRE	HIGH RATE
Annual & Perennial Grasses Listed in Grass Table	See Table	10	16

Mowing: The best control of annual grasses can be achieved by applying VOLUNTEER before grass weeds are mowed. Once a grass is mowed it becomes tougher to control, as much of the available leaf surface has been removed. In areas without a killing frost, some annuals can over-winter after having been mowed multiple times. These grasses form large crowns and may contain many viable buds. These grasses, even though they may be an annual grass, may require repeated applications of VOLUNTEER for partial or complete control.

Irrigated Alfalfa and Mint: Irrigation practices can be very critical to the successful use of VOLUNTEER in established alfalfa and mint and may be necessary to initiate active growth of the weeds prior to application. Generally applications 2 to 4 days after an irrigation are most effective. Irrigation made shortly after application (2 days) can be effective, but more consistent grass control occurs when the irrigation is made before the application.

Aerial Application: Apply VOLUNTEER in a minimum of 10 GPA in established alfalfa and mint when applying by air.

Annual Grass Control: Apply VOLUNTEER at the grass sizes indicated in the Recommendation for Annual Grass Table and rates indicated. If a grass has been cut, apply VOLUNTEER after active growth has resumed and regrowth has reached the minimum height and before it reaches the maximum height indicated. Apply before the alfalfa/mint canopy covers the grasses and interferes with the spray coverage. Some annual grasses are spring- and summer-germinating plants, while others are fall-germinating plants, and the time they are actively growing and most susceptible to VOLUNTEER may vary from region to region. Also some annuals germinate over an extended period of time, and because control of small grasses is desired, applications after each weed flush may be required. As a general rule spray spring- and summer-germinating grasses as early in the season as possible, after

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initial green-up. Spray fall-germinating weeds in the fall soon after they begin growing but before any damage is done due to frost. Late fall applications may be less effective due to environmental conditions, such as frost, slower plant growth, or the onset of flowering.

Perennial Grass Control: VOLUNTEER effectively controls perennial grasses such as bermudagrass, Johnsongrass, quackgrass, wirestem muhly, tall fescue, foxtail barley and orchardgrass. Due in part to lack of tillage, perennial grasses are more difficult to control in a perennial crop such as established alfalfa or mint. A program of repeated applications is usually necessary for best results. The best way to control perennial grasses is to do so in the year of stand establishment before rhizomes and stolons become large and difficult to kill.

Use the high rate under heavy grass pressure and/or when grasses are at or near maximum height.

Always add a crop oil concentrate at 1 qt./A by ground or 1% v/v (but not less than 1 pt./A) to the finished spray volume by air.

RECOMMENDATIONS FOR ANNUAL BLUEGRASS CONTROL WITH VOLUNTEER

GRASS SPECIES	WEED STAGE	RATE FL. OZ./ACRE	HIGH RATE
Annual Bluegrass (<i>Poa annua</i>)	to 4-leaf	6*	16

Apply under favorable soil moisture and humidity which exists within a few days after rainfall or within 7 days after irrigation. Grass needs to be actively growing at time of application(s).

Apply at weed stage indicated on the label, as reduced control can be expected with more mature annual bluegrass.

Use the high rate under heavy grass pressure and/or when annual bluegrass is more mature.

Always add a crop oil concentrate at 1 qt./A by ground to the finished spray volume.

* Use a minimum of 10 fl. oz./A to control annual bluegrass in seedling and established alfalfa and mint.

DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA*, FLAX*, MUSTARD SEED*, SOYBEAN AND SUGAR BEET RECOMMENDATIONS FOR SMALL ANNUAL GRASSES (REDUCED RATE RECOMMENDATIONS NOT FOR USE IN CALIFORNIA)

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Regrowth by tillering may occur if application is made when plants are stressed by lack of moisture, excessive moisture, low or high temperatures and/or under very low humidity.

* Not for use in California.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE ⁽¹⁾ FL. OZ./ ACRE
Barnyardgrass	<i>Echinochloa crus-galli</i>	1-4	4
Broadleaf			
Signalgrass	<i>Brachiaria platyphylla</i>	1-4	5
Crabgrass			
Large	<i>Digitaria sanguinalis</i>	1-3*	4
Large	<i>Digitaria sanguinalis</i>	1-4*	5
Smooth	<i>Digitaria ischaemum</i>	1-3*	4
Smooth	<i>Digitaria ischaemum</i>	1-4*	5
Southern	<i>Digitaria ciliaris</i>	1-4*	5
Fall Panicum	<i>Panicum dichotomiflorum</i>	1-4	4
Foxtail			
Giant	<i>Setaria faberi</i>	1-4	4
Green	<i>Setaria viridis</i>	1-4	4
Millet	<i>Setaria italica</i>	1-4	5
Yellow	<i>Setaria glauca</i>	1-4	4
Seedling			
Johnsongrass	<i>Sorghum halepense</i>	1-6	5
Shattercane	<i>Sorghum bicolor</i>	4-10	4
Texas Panicum	<i>Panicum texanum</i>	1-4	5

(continued)

* Length of lateral growth

⁽¹⁾ Always add a crop oil concentrate at 1 qt./A by ground application to the finished spray volume.

(continued)

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE ⁽¹⁾ FL. OZ./ACRE
Volunteer Cereals			
Barley	<i>Hordeum vulgare</i>	1-4	5
Oats	<i>Avena sativa</i>	1-4	5
Wheat	<i>Triticum aestivum</i>	1-4	5
Volunteer Corn**	<i>Zea mays</i>	4-12	4
Wild Oats	<i>Avena fatua</i>	1-4	5
Wild Proso Millet	<i>Panicum miliaceum</i>	1-6	4

* Length of lateral growth

**Not S.R. Corn

(1) Always add a crop oil concentrate at 1 qt./A by ground application to the finished spray volume.

RECOMMENDATIONS FOR PERENNIAL GRASSES

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the high rate under heavy grass pressure and/or when grasses are at maximum height.
- Do not apply more than 8 fl. oz./A of VOLUNTEER per application to the following crops: garden beets, carrots, radish (and other root vegetables), leaf lettuce, broccoli, cabbage, cauliflower (and other head and stem brassica vegetables), celery, rhubarb (and other leaf petioles), cranberry, cucurbits, fruiting vegetables (except tomatoes), non-bearing food crops, flax* and strawberry. Do not apply more than 6 fl. oz./A of VOLUNTEER per application to canola* or mustard seed*.

* Not for use in California.

GRASS SPECIES		WEED HEIGHT (inches)	RATE FL. OZ./ACRE	HIGH RATE
Bermudagrass	<i>(Cynodon dactylon)</i>			
First Application		3 (or up to 6" runners)	8	16
Repeat Application(s) (if regrowth occurs)		3 (or up to 6" runners)	8	16

(continued)

(continued)

GRASS SPECIES		WEED HEIGHT (inches)	RATE FL. OZ./ACRE	HIGH RATE
Fescue, Tall	<i>(Festuca arundinacea)</i>			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Foxtail Barley	<i>(Hordeum jubatum)</i>			
First Application		2-6	8	16
Repeat Application(s) (if regrowth occurs)		2-6	8	16
Orchardgrass	<i>(Dactylis glomerata)</i>			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Quackgrass*	<i>(Elytrigia repens)</i>			
First Application		4-12	8	16
Repeat Application(s) (if regrowth occurs)		4-12	8	16
Rhizome				
Johnsongrass	<i>(Sorghum halepense)</i>			
First Application		12-24	8	16
Repeat Application(s) (if regrowth occurs)		6-18	6	8
Wirestem Muhly	<i>(Muhlenbergia frondosa)</i>			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Perennial Bluegrass*				
Roughstalk	<i>(Poa trivialis)</i>			
Kentucky	<i>(Poa pratensis)</i>			
First Application		2-4	8	16
Repeat Application(s) (if regrowth occurs)		2-4	8	16

(continued)

(continued)

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL. OZ./ ACRE	HIGH RATE
Bentgrass* (<i>Agrostis</i> spp.)			
First Application	2-4	-	16
Repeat Application(s) (if regrowth occurs)	2-4	-	16

*Control of quackgrass, perennial bluegrass and bentgrass with VOLUNTEER may be enhanced by adding AMS at 2.5 to 4.0 lbs./A.

TANK MIXES

GENERAL INFORMATION

The labels for each of the herbicides recommended for tank mixing with VOLUNTEER are unique to the characteristics of those products and contain restrictions and limitations that may be more restrictive than the VOLUNTEER label in certain considerations. Those concerns may include, but are not limited to:

1. Geographic restrictions - all products are not registered for use in all areas and rates may vary from one region of labeled use to another;
 2. Crop rotation restrictions;
 3. Applicator certification requirements;
 4. Worker safety rules (e.g. protective clothing, reentry time, posting);
 5. Soil type or soil characteristics (e.g. pH, OM);
 6. Maximum dosage or number of applications per season;
 7. Rain free period required; or
 8. Application timing (e.g. pre-harvest interval)
9. Do not exceed the total season rates.

THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK MIX MUST BE FOLLOWED.

TANK MIX APPLICATION OF VOLUNTEER AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROADLEAF WEEDS

- Apply only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Apply when the first grass or broadleaf weed species in a mixed population reaches the recommended height or growth stage for treatment.

- Apply under favorable soil moisture and humidity that exist a few days after rainfall or within seven days after irrigation.
- Always add the appropriate adjuvant to the spray mix at the rate recommended for each specific tank mix combination.
- Tank mix applications may sometimes result in reduced grass control and possible increases in crop injury as compared to either product used alone. If regrowth occurs, or an additional flush of new grass emerges, make a second application of VOLUNTEER, as specified in the respective size and rate tables.
- Do not tank mix VOLUNTEER when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, add the correct amount of VOLUNTEER. Agitation should create a rippling or rolling action on the water surface.
3. If tank mixing VOLUNTEER with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
4. Add any required adjuvants (crop oil concentrate, non-ionic surfactant and/or nitrogen solution).
5. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**

Failure to agitate the spray solution may result in improper mixing of the herbicides and unsatisfactory weed control. Mixing and compatibility qualities should be verified by a jar test.

INFORMATION ON ANTAGONISM

Tank mixes of VOLUNTEER with postemergence broadleaf herbicides have shown some reduction or failure to control certain grass species which would have otherwise been controlled when VOLUNTEER is applied alone. Activity of the postemergence broadleaf herbicide in the tank mix is not affected.

ALFALFA

Table 1. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND AIR	
			GROUND	AIR
VOLUNTEER + 2,4-DB ⁽⁴⁾	10 to 16 fl. oz. + Refer to 2,4-DB label	10 to 16 fl. oz. + Refer to 2,4-DB label	1%	1%
VOLUNTEER + Pursuit DG ⁽⁵⁾ or Pursuit ⁽⁵⁾	10 to 16 fl. oz. + 1.08 to 2.16 oz. or 3 to 6 fl. oz.	—	1%	1%
VOLUNTEER + Buctril® 2L ⁽⁶⁾ or Buctril Gel ^(6,7)	10 to 16 fl. oz. + 1.0 to 1.5 pts. or 0.5 to 0.75 pt.	—	0.5%	0.5%

⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.

⁽²⁾ Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

⁽³⁾ Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

⁽⁴⁾ VOLUNTEER plus 2,4-DB may increase the severity of crop injury when tank mixed. Alfalfa plants will generally outgrow this temporary crop injury within a few weeks.

⁽⁵⁾ Before using this tank mix, read and understand the Pursuit or Pursuit DG labels for geographical restrictions and restrictions regarding alfalfa growth stage and type. Failure to do so can result in crop injury to alfalfa. Do not feed, graze, or harvest alfalfa for 30 days following an application of Pursuit to alfalfa.

⁽⁶⁾ In the states of Washington, Oregon, Idaho, Montana, Wyoming,

Colorado, Utah, Nevada and the western halves of North Dakota, South Dakota, Nebraska, and Kansas: The VOLUNTEER plus Buctril or Buctril Gel tank mix must be applied in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliates. Unacceptable crop injury may occur to alfalfa seedlings less than the 2 trifoliolate leaf stage. VOLUNTEER plus Buctril or Buctril Gel applications made when temperatures are expected to exceed 80°F at (and 3 days following) application can result in unacceptable crop injury. In the states not listed above, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. VOLUNTEER plus Buctril or Buctril Gel applications made when temperatures are expected to exceed 70°F at (and 3 days following) application can result in unacceptable crop injury. Crop leaf burn can occur following VOLUNTEER plus Buctril or Buctril Gel application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected.

⁽⁷⁾ Do not apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

CANOLA*

Table 2. REDUCED RATE VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR CANOLA (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE			
	ANNUAL GRASSES ⁽¹⁾	PERENNIAL GRASSES	AMMONIUM SULFATE	
			GROUND	AIR
VOLUNTEER ⁽²⁾ + Liberty ⁽³⁾	4 to 5 fl. oz. + 34 fl. oz.	—	3.0 lbs.	3.0 lbs.

* Not for use in California.

⁽¹⁾ Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN, AND SUGAR BEET RECOMMENDATIONS FOR SMALL ANNUAL GRASSES** table.

⁽²⁾ Do not apply VOLUNTEER tank mix during or after bolting or flowering or crop injury may occur.

⁽³⁾ For use only on Liberty Link canola.

COTTON

Table 3. VOLUNTEER TANK MIXED WITH COBRA® AND MSMA APPLIED POST DIRECTED TO COTTON

PRODUCT ⁽¹⁾	APPLICATION RATES/ACRE ⁽²⁾		CROP OIL CONCENTRATE ⁽³⁾ V/V	COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	
VOLUNTEER ⁽⁴⁾ + Cobra + MSMA (4.0 lbs./gal.) or MSMA (6.6 lbs./gal.)	6 to 8 fl. oz.	8 to 16 fl. oz.	1%	Reduce broadcast rate in proportion to the band area actually treated.
	See Cobra label for rates to control broadleaf weeds and height limitations for cotton. Refer to the VOLUNTEER label for weed height and species controlled.			
	See MSMA label for rates to control broadleaf weeds and height limitations for cotton. Refer to the VOLUNTEER label for weed height and species controlled.			

- (1) Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- (2) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- (3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.
- (4) If at the time of application, grass height is so tall that post-directed applications cannot get good coverage over the top of the grassy weeds, then poor control may result and a second (non-post directed) application of VOLUNTEER may be necessary.

COTTON (continued)

Table 4. VOLUNTEER TANK MIXED WITH BUCTRIL® 4 EC TO CONTROL EMERGED WEEDS IN BxN COTTON AS A BROADCAST APPLICATION

PRODUCT ⁽¹⁾	APPLICATION RATES/ACRE ⁽²⁾	CROP OIL CONCENTRATE PER ACRE ⁽³⁾	COMMENTS ⁽⁷⁾
	ANNUAL GRASSES		
VOLUNTEER + Buctril 4 EC ^(4,5,6)	8 to 16 fl. oz. + See Buctril 4 EC label for rates to control broadleaf weeds and height limitations for cotton.	1 qt.	See charts for grasses controlled.

- (1) Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage.
- (2) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER at the recommended rate with the appropriate amount of crop oil concentrate in a non-Buctril tank mix.
- (3) Always add a crop oil concentrate at 1 qt./A by ground in the finished spray solution.
- (4) Applications of Buctril 4 EC can be made only to cotton that has been genetically modified for crop tolerance to postemergence over-the-top applications of bromoxynil.
- (5) Do not apply the VOLUNTEER plus Buctril tank mix within 75 days of harvest.
- (6) Do not exceed 2 applications of Buctril before cotton is 12 inches tall and one application after 12 inches tall.
- (7) Use a minimum of 10 gals. of spray solution per acre.

COTTON (continued)

Table 5. VOLUNTEER TANK MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN COTTON AS A BROADCAST APPLICATION

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		ADJUVANT		COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	Glyphosate formulation with built in adjuvant	Glyphosate formulation without built in adjuvant	
VOLUNTEER + Glyphosate	6 to 8 fl. oz.	8 to 16 fl. oz.	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	Crop oil concentrate @ 1 pt./A plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	See charts for grasses controlled. Use a minimum of 10 gals. of spray solution per acre.
	See glyphosate label for rates to control broadleaf weeds and height limitations for cotton.				

⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER at the recommended rate with the appropriate amount of crop oil.

DRY BEAN

Table 6. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR DRY BEANS (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER + Basagran®	8 to 10 fl. oz. + 1.0 to 2.0 pts.	10 to 16 fl. oz. + 1 to 2 pts.	1 %	1 %

⁽¹⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.

⁽²⁾ Broadleaf weed control may be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them

from receiving complete coverage. Tank mixing is not recommended in these situations.

⁽³⁾ Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

FLAX*

Table 7. REDUCED RATE VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR FLAX (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE			
	ANNUAL GRASSES ⁽¹⁾	PERENNIAL GRASSES	CROP OIL CONCENTRATE	
			GROUND	AIR
VOLUNTEER + Bronate Advanced ^{TM(2,3)}	4 to 5 fl. oz. + 11.4 fl. oz.	–	1 pt.	1 pt.
VOLUNTEER + Bronate ^{®(2,3)}	4 to 5 fl. oz. + 0.9 pt.	–	1 pt.	1 pt.
VOLUNTEER + Buctril ^(2,3)	4 to 5 fl. oz. + 1.0 pt.	–	1 pt.	1 pt.
VOLUNTEER + Rhonox ^{®(2,3)}	4 to 5 fl. oz. + 0.25 to 0.5 pt.	–	1 pt.	1 pt.

* Not for use in California.

⁽¹⁾ Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET RECOMMENDATIONS FOR SMALL ANNUAL GRASSES** table.

⁽²⁾ Do not apply VOLUNTEER tank mix during or after the bud stage or to ornamental flax or crop injury may occur.

⁽³⁾ Do not apply tank mixes if temperatures are expected to exceed 85°F at (or 3 days following) application or crop injury may occur.

SOYBEAN

Table 8. VOLUNTEER TANK MIXES⁽³⁾ TO CONTROL ANNUAL GRASSES WHEN USED AS A BURNDOWN IN NO-TILL SOYBEAN

PRODUCT	PRODUCT RATE/ ACRE ⁽¹⁾	GRASS HEIGHT (inches)	CROP OIL CONCENTRATE/ ACRE ⁽²⁾	28%N OR 32%N QTS./A OR 2.5 TO 4.0 LBS. AMS
VOLUNTEER + 2,4-D ester ⁽³⁾	3 fl. oz.	Foxtail 1-3 Fall Panicum 1-3	1 qt.	1 to 2 qts. <i>or</i> 2.5 to 4.0 lbs. AMS
	4 fl. oz.	Foxtail 1-4 Fall Panicum 1-4	1 qt.	1 to 2 qts. <i>or</i> 2.5 to 4.0 lbs. AMS
	6 to 8 fl. oz. + 0.5 lb. ai	(See Grass Chart for grasses claimed)	1 qt.	1 to 2 qts. <i>or</i> 2.5 to 4.0 lbs. AMS

*2,4-D ester should not be used where drift sensitive crops may be grown.

⁽¹⁾ If regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER according to the appropriate size and rate recommendations.

⁽²⁾ Always use a crop oil concentrate at the listed rate in the finished spray volume.

⁽³⁾ The following products can be tank mixed with VOLUNTEER plus 2,4-D ester: Valor[®], Authority[®] Broadleaf, Canopy XL[®], Dual[®] 8 E, Dual II[®], Dual Magnum[®], Prowl[®], Sencor[®], Sencor plus the Dual products and Turbo[®].

SOYBEAN (continued)

Table 9. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER + Cobra	6 to 8 fl. oz. + 12.5 fl. oz.	8 to 16 fl. oz. + 12.5 fl. oz.	0.5 to 1%	1%
VOLUNTEER + Basagran [®] 4 SL	8 to 10 fl. oz. + 1 to 2 pts.	10 to 16 fl. oz. + 1 to 2 pts.	1%	1%
VOLUNTEER + Glyphosate (For use on Roundup Ready soybeans only)	6 to 8 fl. oz. + 0.75 to 3.0 lb. ai	8 to 16 fl. oz. + 0.75 to 3.0 lb. ai	0.5 to 1% ⁽⁴⁾	1% ⁽⁴⁾
VOLUNTEER + Blazer [®] 2 SL	6 to 8 fl. oz. + 1 to 1.5 pts.	6 to 8 fl. oz. + 1 to 1.5 pts.	0.5 to 1%	1%
VOLUNTEER + Flexstar [®] HL ⁽⁶⁾	6 to 8 fl. oz. + Refer to the Flexstar HL label for specific application rates.	8 to 16 fl. oz. + Refer to the Flexstar HL label for specific application rates.	1%	1%
VOLUNTEER + Classic [®] 25 DG	8 to 10 fl. oz. + 0.5 to 0.75 oz.	10 to 16 fl. oz. + 0.5 to 0.75 oz.	1%	1%
VOLUNTEER ⁽⁵⁾ + Pursuit [®] 70 DG	6 to 8 fl. oz. + 1.44 oz.	8 to 16 fl. oz. + 1.44 oz.	1%	1%

(continued)

SOYBEAN (continued)

Table 9. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to the recommendation tables above for specific grasses and growth stages.) (continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER ⁽⁵⁾ + Cobra + Classic 25 DG	8 to 10 fl. oz. + 6 to 8 fl. oz. + 0.5 to 0.75 oz.	-	0.5%	1%
VOLUNTEER ⁽⁵⁾ + Cobra + Basagran 4 SL	8 to 10 fl. oz. + 6 to 10 fl. oz. + 1 to 1.5 pts.	-	0.5%	1%
VOLUNTEER ⁽⁵⁾ + Cobra + Pursuit 70 DG	8 to 10 fl. oz. + 6 to 10 fl. oz. + 1.44 oz.	-	0.5%	1%
VOLUNTEER ⁽⁵⁾ + Storm [®]	8 to 10 fl. oz. + 1.5 pts.	-	0.5%	1%
VOLUNTEER ⁽⁵⁾ + Resource [®] + Pursuit 70 DG	8 to 10 fl. oz. + 4 fl. oz. + 1.44 oz.	-	1%	1%
VOLUNTEER ⁽⁵⁾ + Resource + Basagran	8 to 10 fl. oz. + 4 fl. oz. + 1 pt.	-	1%	1%

(continued)

SOYBEAN (continued)

Table 9. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to the recommendation tables above for specific grasses and growth stages.) (continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER ⁽⁵⁾ + Resource + Classic	8 to 10 fl. oz. + 4 fl. oz. + 0.5 oz.	-	1%	1%
VOLUNTEER ⁽⁵⁾ + Cobra + Resource	6 to 8 fl. oz. + 6 fl. oz. + 4 fl. oz.	-	0.5%	1%
VOLUNTEER ⁽⁵⁾ + Firstrate [®]	6 to 8 fl. oz. + 0.3 oz.	8 to 16 fl. oz. + 0.3 oz.	1%	-
VOLUNTEER ⁽⁵⁾ + Cobra + Firstrate	6 to 8 fl. oz. + 6 to 8 fl. oz. + 0.3 oz.	8 to 16 fl. oz. + 6 to 8 fl. oz. + 0.3 oz.	1%	-
VOLUNTEER ⁽⁵⁾ + Raptor [®] (1 AS)	6 to 8 fl. oz. + 4 to 5 fl. oz.	-	1%	-
VOLUNTEER ⁽⁵⁾ + Cobra + Raptor (1 AS)	6 to 8 fl. oz. + 6 to 8 fl. oz. + 4 to 5 fl. oz.	-	1%	-

(continued)

SOYBEAN (continued)

Table 9. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to the recommendation tables above for specific grasses and growth stages.) (continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER ⁽⁵⁾ + Synchrony® STS™	6 to 8 fl. oz. ⁽⁷⁾ + 0.5 oz./A	—	1 qt./A	—
VOLUNTEER ⁽⁵⁾ + Cobra + Synchrony STS	6 to 8 fl. oz. ⁽⁷⁾ + 4 to 8 fl. oz. + 0.5 oz.	—	1 pt./A	—
VOLUNTEER ⁽⁵⁾ + Resource	6 to 8 fl. oz. + 4 to 12 fl. oz.	—	1 qt./A	—
VOLUNTEER ⁽⁵⁾ + Frontrow™	8 to 10 fl. oz. + Refer to Frontrow label for use rates.	—	1%	—
VOLUNTEER + Firstrate + Flexstar HL ⁽⁶⁾	6 to 8 fl. oz. + 0.3 oz. + Refer to the Flexstar HL label for specific application rates.	8 to 16 fl. oz. + 0.3 oz. + Refer to the Flexstar HL label for specific application rates.	1%	—

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
 (2) Broadleaf weed control may be reduced when grass populations are tall

or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

- (3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.
 (4) The addition of 2.5 lb. of ammonium sulfate is required when VOLUNTEER is tank mixed with glyphosate. If the glyphosate formulation has a stand alone built in adjuvant, add 0.125% v/v non-ionic surfactant in place of crop oil concentrate. If the glyphosate formulation does not have a built in adjuvant system, add 0.5 to 1% crop oil concentrate for ground application and 1% v/v for aerial application.
 (5) The addition of 1 to 2 qts./A of liquid fertilizer (10-34-0, 28%N, or 32%N) is recommended when VOLUNTEER is tank mixed with Pursuit, Resource, Storm, Firstrate, Synchrony, Raptor, Frontrow, Cobra plus Classic, Cobra plus Basagran, Cobra plus Pursuit, Cobra plus Firstrate, Cobra plus Synchrony, and Cobra plus Raptor. An equivalent amount (2.5 to 4.0 lbs./A) of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.
 (6) Refer to Flexstar HL label for geographic and rotational restrictions.
 (7) Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET RECOMMENDATIONS FOR SMALL ANNUAL GRASSES** table.

Table 10. REDUCED RATE VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (Refer to table for reduced rate use in dry bean, canola, flax, mustard seed, soybean and sugar beet recommendations for small annual grasses for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ^(3,4) (V/V)	
	ANNUAL GRASSES ⁽²⁾	PERENNIAL GRASSES	GROUND	AIR
VOLUNTEER + Firstrate	4 to 8 fl. oz. + 0.3 oz.	—	1%	1%
VOLUNTEER + Pursuit 70 DG	4 to 6 fl. oz. + 1.44 oz.	—	1%	1%

- (1) If grass regrowth occurs or an additional flush of new grass emerges,

make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.

- (2) Annual grasses and sizes controlled with these tank mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET RECOMMENDATIONS FOR SMALL ANNUAL GRASSES** table.
- (3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.
- (4) The addition of 1 to 2 qts./A of liquid fertilizer (10-34-0, 28%N, or 32%N) is required when VOLUNTEER is tank mixed at reduced rates. An equivalent amount (2.5 to 4.0 lbs./A) of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

PEANUT

Table 11. VOLUNTEER TANK MIXES WITH BROADLEAF HERBICIDES FOR PEANUT (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES ⁽²⁾	PERENNIAL GRASSES	GROUND	AIR
	VOLUNTEER + Basagran	8 to 10 fl. oz. + 1.0 to 2.0 pts.	—	1%
VOLUNTEER + Blazer	8 to 10 fl. oz. + 0.5 to 1.5 pts.	—	1%	1%
VOLUNTEER + Storm	8 to 10 fl. oz. + 1.5 pts.	—	1%	1%

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- (2) Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- (3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

PEANUT (continued)

RECOMMENDATIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY IN PEANUT WITH VOLUNTEER

GRASS SPECIES	WEED STAGE	RATE FL. OZ./ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height charts "RECOMMENDATIONS FOR ANNUAL GRASSES" & "RECOMMENDATIONS FOR PERENNIAL GRASSES"	Up to and including grasses in the seed head stage	16	32

Do not apply as part of a tank mix when applying VOLUNTEER for grass suppression.

Add a crop oil concentrate at 1 qt./A by ground to the finished spray volume.

SUGAR BEET

Table 12. VOLUNTEER TANK MIXED WITH STINGER® APPLIED TO SUGAR BEET (Refer to the recommendation tables above for specific grasses and growth stages.)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
	VOLUNTEER + Stinger	6 to 8 fl. oz. + See Stinger label for rates.	8 to 16 fl. oz. + See Stinger label for rates.	1%

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- (2) Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- (3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

SUGAR BEET (continued)

Table 13. VOLUNTEER TANK MIXED WITH BETAMIX® or BETANEX® APPLIED TO SUGAR BEET

PRODUCT ⁽²⁾	WEEDS CONTROLLED		WEED HEIGHT (inches)	APPLICATION RATE/ACRE ⁽¹⁾
	COMMON NAME	SCIENTIFIC NAME		
VOLUNTEER ⁽³⁾ +	Barnyardgrass	<i>Echinochloa crus-galli</i>	1-3	8 fl. oz.
	Foxtail	<i>Setaria</i> spp.	1-3	
	Foxtail Millet	<i>Setaria italica</i>	1-3	
	Wild Oats	<i>Avena fatua</i>	1-3	
	Wild Proso Millet	<i>Panicum miliaceum</i>	1-3	
Betamix or Betanex	See Betamix label for rates to control broadleaf weeds. No additives are recommended in the tank mix.			
	See Betanex label for rates to control broadleaf weeds. No additives are recommended in the tank mix.			

- ⁽¹⁾ Do not use crop oil concentrate. No additives are recommended in the tank mix. If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix herbicide), according to the appropriate size and rate recommendations.
- ⁽²⁾ Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- ⁽³⁾ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of VOLUNTEER at full label rate with appropriate rate of crop oil concentrate.

Table 14. VOLUNTEER PLUS BETANEX OR BETAMIX TANK MIX FOR THREE SEQUENTIAL APPLICATIONS FOR ANNUAL GRASS CONTROL (MICRO-RATE APPLICATION)

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		METHYLATED SEED OIL ⁽²⁾ (V/V)	
	ANNUAL GRASSES	GRASSES CONTROLLED (inches)	GROUND	AIR
VOLUNTEER	2 to 3 fl. oz.	Green Foxtail (1-2)	1.5%	1.5%
+	+	Yellow Foxtail (1-2)		
Betanex	8 to 12 fl. oz. ⁽³⁾	Barnyardgrass (1-2)		
or	or	Wild Oat (1-2)		
Betamix	8 to 12 fl. oz. ⁽³⁾	Volunteer Cereals (1-2)		

- ⁽¹⁾ Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
- ⁽²⁾ Always use a methylated seed oil at the listed rate (but not less than 1 pt./A) in the finished spray volume.
- ⁽³⁾ Use 8 fl. oz./A rate when sugar beet are in the cotyledon to 4 leaf stage. Rate can be increased up to 12 fl. oz./A when the smallest sugar beet plants in the field are in the 4 true leaf stage or larger.

Directions for Use for Micro-Rate Applications to Sugar Beets
General Information

Multiple micro-rate applications of VOLUNTEER in tank mixtures with reduced rates of Betanex or Betamix and methylated seed oils may be applied by air or ground equipment to sugar beets to control early germinating annual grasses listed above. The rate of Betanex or Betamix must not exceed 0.12 lb. ai./A (broadcast application) when in combination with these spray adjuvants. Note that maximum rate allowed varies depending on crop growth stage. The use of wetting agents or spray adjuvants with conventional rates (0.73 to 1.22 lb. ai./A) or multiple low rate (0.24 to 0.73 lb. ai./A) applications of Betanex or Betamix is prohibited on the Betanex and Betamix master label. Favorable climatic conditions (good conditions for plant growth and development) are essential for adequate weed control. All use precautions and restrictions on the Betanex and Betamix master labels must be followed.

Directions for Using Micro-Rate Multiple Applications of VOLUNTEER Tank Mixes

Apply VOLUNTEER in broadcast applications only at a rate of 2 to 3 fl. oz./A in tank mixture with either Betanex or Betamix following the Directions For Use on the tank mix partner label. A minimum of 3 sequential applications of 2 fl. oz./A or a minimum of 2 sequential applications of 3 fl. oz./A should be utilized for VOLUNTEER tank mixtures. A minimum of 3 sequential applications of Betanex or Betamix should be used. Accurate timing is essential; make initial application immediately after weeds emerge, and make repeat applications on 5 to 7 day intervals. If weed control is not adequate due to climatic conditions, spray coverage or other factors, return to conventional application rates of VOLUNTEER (6 to 8 fl. oz./A) and add rates of Betanex or Betamix as directed on their label. When using conventional rates of Betanex or Betamix in tank mixtures with VOLUNTEER, a spray adjuvant is not recommended.

Use Precautions for Micro-Rate Applications: (See VOLUNTEER, Betanex and Betamix master label for further use precautions.)

Not all weeds will be adequately controlled, even with favorable climatic conditions. Conventional rates of VOLUNTEER, Betanex or Betamix and/or hand labor may be required if multiple micro-rate applications do not adequately control weeds. Plugging of spray nozzles may be encountered due to the potential for formation of a precipitate in the spray solution that is often associated with micro-rate applications. Tenkoz will not be responsible for any nozzle plugging that may occur with the use of multiple micro-rate applications. Methylated seed oils must not be added if the Betanex or Betamix rate exceeds 0.12 lb. ai/A broadcast, as the addition of methylated seed oils could increase the possibility of crop injury at dosage rates greater than 0.12 lb. ai/A.

GROUND APPLICATION

Use of sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 10 gals. and a maximum of 20 gals. of spray solution per acre. Spray pressures should reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

AERIAL APPLICATION

Use of sufficient spray volumes is essential to ensure complete coverage. Use a minimum of 5 gals. and a maximum of 15 gals. of spray solution per acre.

Table 15. TANK MIX APPLICATION OF VOLUNTEER AND FUNGICIDES FOR CONTROL OF GRASS WEEDS AND DISEASES IN SUGAR BEET

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽³⁾ (V/V)
	ANNUAL GRASSES	PERENNIAL GRASSES	
VOLUNTEER + Eminent [®]	6 to 8 fl. oz. + 13 fl. oz.	8 to 16 fl. oz. + 13 fl. oz.	1%

(1) If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix fungicide) according to the appropriate size and rate recommendations.

(2) Refer to VOLUNTEER and fungicide label for rates and weeds and diseases controlled.

(3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

Table 16. TANK MIX APPLICATION OF VOLUNTEER AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS IN ALFALFA, COTTON, MINT, PEANUT, SOYBEAN AND SUNFLOWER

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE (V/V) ⁽³⁾	CROP					
	ANNUAL GRASSES	PERENNIAL GRASSES		Alfalfa ⁽⁴⁾	Cotton	Mint ^(4,5)	Peanut	Soybean	Sunflower
VOLUNTEER + Orthene [®] 75 S or Orthene 97	6 to 8 fl. oz. + 0.33 to 1.33 lbs. or 0.25 to 1.0 lb.	8 to 16 fl. oz. + 0.33 to 1.33 lbs. or 0.25 to 1.0 lb.	1%		X	X	X		
VOLUNTEER + Orthene 90 S ⁽⁶⁾	6 to 8 fl. oz. + 0.25 to 1 lb.	8 to 16 fl. oz. + 0.25 to 1 lb.	1%		X	X	X	X	
VOLUNTEER + Danitol [®] 2.4 EC	6 to 8 fl. oz. + 10-2/3 to 16 fl. oz.	8 to 16 fl. oz. + 10-2/3 to 16 fl. oz.	1%		X		X		
VOLUNTEER + Asana XL [®]	6 to 8 fl. oz. + Refer to Asana XL label.	8 to 16 fl. oz. + Refer to Asana XL label.	1%						X

(continued)

Table 16. TANK MIX APPLICATION OF VOLUNTEER AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS IN ALFALFA, COTTON, MINT, PEANUT, SOYBEAN AND SUNFLOWER (continued)

PRODUCT ⁽²⁾	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE (V/V) ⁽³⁾	CROP					
	ANNUAL GRASSES	PERENNIAL GRASSES		Alfalfa ⁽⁴⁾	Cotton	Mint ^(4,5)	Peanut	Soybean	Sunflower
VOLUNTEER + Warrior®	6 to 8 fl. oz. + Refer to Warrior label.	8 to 16 fl. oz. + Refer to Warrior label.	1%						X
VOLUNTEER + Warrior	10 to 16 fl. oz. ⁽⁷⁾ + Refer to Warrior label.	10 to 16 fl. oz. + Refer to Warrior label.	1%	X					
VOLUNTEER + Baythroid®	10 to 16 fl. oz. ⁽⁷⁾ + Refer to Baythroid label.	10 to 16 fl. oz. + Refer to Baythroid label.	1%	X					
VOLUNTEER + Dimethoate®	10 to 16 fl. oz. ⁽⁷⁾ + Refer to Dimethoate label.	10 to 16 fl. oz. + Refer to Dimethoate label.	1%	X					
VOLUNTEER + Lorsban®	10 to 16 fl. oz. ⁽⁷⁾ + Refer to Lorsban label.	10 to 16 fl. oz. + Refer to Lorsban label.	1 to 2 pt. ⁽⁸⁾	X					
VOLUNTEER + Pounce®	10 to 16 fl. oz. ⁽⁷⁾ + Refer to Pounce label.	10 to 16 fl. oz. + Refer to Pounce label.	1%	X					

(1) If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of VOLUNTEER alone (without a tank mix insecticide) according to the appropriate size and rate recommendations.

(2) Refer to VOLUNTEER and insecticide label for rates and weeds and insects controlled.

(3) Always use a crop oil concentrate at the listed rate (but not less than 1 pt./A) in the finished spray volume.

(4) Certain insecticides may cause temporary phytotoxic symptoms on alfalfa and mint foliage. Refer to the insecticide label for further information. It is suggested that prior to using any of these insecticide/herbicide tank mixtures, that a small area of the field be treated first and observations for crop injury be made prior to treating the whole field.

(5) The VOLUNTEER rate should be 6 to 8 fl. oz./A for annual grass control in baby mint, minimum of 8 fl. oz./A for annual grass control in established mint and 8 to 16 fl. oz./A for perennial grass control. Crop oil concentrate should be added at the rate of 1.0 to 2.0 pts./A.

(6) Insecticide tank mix use with Orthene 90 S in soybeans is permitted only in a state having an approved Section 24(c) registration for Orthene 90 S use in soybeans.

(7) The VOLUNTEER rate should be 6 to 8 fl. oz./A for annual grass control in seedling alfalfa.

(8) For the VOLUNTEER plus Lorsban tank mix, reduce the adjuvant rate down to 1.0 pt./A when the Lorsban rate is 1.0 pt./A or higher.

Table 17. RECOMMENDATIONS FOR ROUNDUP READY® VOLUNTEER CORN CONTROL IN ROUNDUP READY SOYBEANS WITH VOLUNTEER TANK MIX

Roundup Ready Volunteer Corn Height (inches)	VOLUNTEER Rate fl. oz./A	Glyphosate ⁽¹⁾ rate for formulations WITH built in adjuvant	Adjuvant
<12	4	1.0 to 2.0 lbs. ai/A (Approximately equivalent to 22 to 44 fl. oz./A of Roundup Weather Max)	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier
12 to 18	5		
18 to 24	6		

(continued)

(1) Glyphosate formulation must be labeled for use on Roundup Ready soybeans.

Table 17. RECOMMENDATIONS FOR ROUNDUP READY® VOLUNTEER CORN CONTROL IN ROUNDUP READY SOYBEANS WITH VOLUNTEER TANK MIX (continued)

Roundup Ready Volunteer Corn Height (inches)	VOLUNTEER Rate fl. oz./A	Glyphosate ⁽¹⁾ rate for formulations WITHOUT built in adjuvant	Adjuvant
<12	4	Up to 2.0 lbs. ai/A (Equivalent to 32 to 64 fl. oz./A of Roundup Original)	Crop oil concentrate @ 1pt./A plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier
12 to 18	5		
18 to 24	6		

⁽¹⁾ Glyphosate formulation must be labeled for use on Roundup Ready soybeans.

THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK MIX MUST BE FOLLOWED.

- Apply only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Apply under favorable soil moisture and humidity which exist a few days after rainfall or within seven days after irrigation.
- Tank mix applications may sometimes result in reduced grass control. If regrowth occurs, or an additional flush of new grass emerges, make a second application of VOLUNTEER, as specified in the respective size and rate tables.
- Do not tank mix VOLUNTEER when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.
- This tank mix may be applied postemergence to Roundup Ready soybeans up through the full flowering stage. Do not apply less than 60 days before harvest.
- Avoid contact with foliage, green stems, or fruit crops, or any desirable plants and trees, other than soybeans with the Roundup Ready gene as severe injury or destruction will result.
- Do not allow the VOLUNTEER plus Roundup to mist, drip, drift or splash onto desirable vegetation as minute quantities of the tank mix can cause severe damage or destruction to the crops, plants or other areas on which treatment was not intended. The likelihood of

(continued)

(continued)

injury occurring from drift of this product is greatest when winds are gusty or in excess of 5 miles per hour. Even under lesser wind velocities, avoid conditions that allow spray drift to occur such as combinations of spray pressure and nozzle type that will result in fine particles (mist) that are likely to drift.

FALLOW LAND

DIRECTIONS FOR USE

VOLUNTEER may be used to control annual and perennial grasses in land that has been left fallow the previous year and other non-producing agricultural areas. Apply VOLUNTEER at 6 to 8 fl. oz./A for annual grasses and 8 to 16 fl. oz./A for perennial grasses. When both grass and broadleaf weeds are the target pest, VOLUNTEER may be tank mixed with 2,4-D ester or Banvel® SGF for broad spectrum control. When both annual and perennial grasses occur in the same field, use a minimum of 8 fl. oz./A VOLUNTEER rate.

GENERAL INFORMATION

- Use a minimum spray volume of 5 gals./A for aerial applications and 15 gals./A for ground applications.
- Apply only to actively growing grasses when the first grass reaches the recommended weed height as specified by the Recommendations for Annual and Perennial Grasses section of this label.
- Annual grasses that emerge after the VOLUNTEER application will not be controlled, and a second application may be necessary.
- The control of perennial grasses may require more than 1 application in non-tilled areas.
- Do not plant any crop for 30 days after application unless clethodim is registered for use in that crop.
- Do not apply to grasses that have tillered, formed seedheads or exceeded recommended growth stage.
- Do not use flood jet nozzles.
- Do not apply to drought stressed grasses.
- Do not mow area for 2 weeks prior to or after the VOLUNTEER application.

TABLE 18. VOLUNTEER IN TANK MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ⁽²⁾ (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
	VOLUNTEER + 2,4-D ester or Banvel SGF	6 to 8 fl. oz. + 0.5 lb./A or See Banvel SGF label for rates.	8 to 16 fl. oz.	1%

⁽¹⁾ Refer to VOLUNTEER label for weed height and species control. Review Banvel SGF and 2,4-D labels for crop restrictions, use rates and weeds controlled.

⁽²⁾ Always use a crop oil concentrate or methylated seed oil containing at least 15% emulsifier at the listed rate (but not less than 1 pt./A) in the finished spray volume.

**RECOMMENDATIONS FOR GRASS SUPPRESSION
IN NON-CROP AREAS WITH VOLUNTEER**

GRASS SPECIES	WEED STAGE	RATE FL. OZ./ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height chart above.	Up to and including grasses in the seed head stage	12	16
Do not apply as part of a tank mix when applying VOLUNTEER for grass suppression. Add a crop oil concentrate at 1 qt./A by ground to the finished spray volume.			

TABLE 19. VOLUNTEER FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM-SEASON GRASS RESTORATION PROJECTS

PRODUCT	PRODUCT RATE	GRASS WEEDS CONTROLLED/SUPPRESSED		WEED STAGE
		COMMON NAME	SCIENTIFIC NAME	
VOLUNTEER	10 to 12 fl. oz./A	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 inches tall (40 to 60% green-up)

Adjuvant: VOLUNTEER must be applied with crop oil concentrate at 1 qt./A, plus a spray grade ammonium sulfate at 2.5 to 4 lbs./A.

Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add VOLUNTEER, then add crop oil concentrate.

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue. Apply in the spring, at 40 to 60% tall fescue green-up, prior to emergence of warm-season grasses. Do not mow area for 2 weeks after the VOLUNTEER application.

Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 PSI at the nozzle. Apply using flat fan or hollow cone nozzles. Do not use flood jet nozzles.

Apply only to fields that have warm-season grasses established for 2 years. Applications of VOLUNTEER to emerged warm-season grasses may cause injury. Do not apply to warm-season grasses grown for seed.

Do not graze treated fields or feed treated forage and or hay to livestock. Do not plant any crop for 30 days after application, unless clethodim is registered for use in that crop.

NOTE: VOLUNTEER applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47 degrees Fahrenheit.

TABLE 20. VOLUNTEER FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NON-PRODUCING AGRICULTURAL AREAS

PRODUCT	PRODUCT RATE	SUPPRESSION	APPLICATION TIMING
VOLUNTEER	1-1/2 to 2 fl. oz./A	Tall Fescue Seed-Heads (<i>Festuca arundinacea</i>)	(50 to 90% Tall Fescue green-up)

Adjuvant: VOLUNTEER must be applied with crop oil concentrate at 1 qt./A, plus a spray grade ammonium sulfate at 2.5 to 4 lb./A.

Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add VOLUNTEER, then add crop oil concentrate.

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

Apply at 50 to 90% tall fescue green-up.

Use the higher VOLUNTEER rate if less tall fescue green matter is present.

Do not mow area for two weeks after the VOLUNTEER application.

Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 psi at the nozzle. Apply using flat fan or hollow cone nozzles. Do not use flood jet nozzles.

2,4-D ester may be added to this tank mix for broadleaf control (see 2,4-D ester label for weeds controlled).

Do not graze treated fields or feed treated forage and/or hay to livestock. Do not plant any crop for 30 days after application, unless clethodim is registered for use in that crop.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

Open dumping is prohibited.

PESTICIDE STORAGE

Keep pesticide in original container.

Do not put concentrate or dilute into food or drink containers.

Store in cool, dry place.

Do not store diluted spray.

Emergency Response: For help with any spill, leak, fire or exposure involving this material, call day or night 1-800-892-0099.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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