GLUFOSINATE-AMMONIUM	GROUP	10	HERBICIDE

Total® TNV

ACTIVE INGREDIENT:

Glufosinate-ammonium 24.5%*

OTHER INGREDIENTS: 75.5%

TOTAL: 100.0%

*Equivalent to 2.34 pounds of active ingredient per U.S. gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF ON SKIN:	• 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 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. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison Center or doctor or going for treatment. You may also contact 1-877-424-7452 for emergency medical treatment information.	
NOTE TO PHYSICIAN: If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.	

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS, COMPLETE DIRECTIONS FOR USE, WARRANTY DISCLAIMER AND LIMITATION OF WARRANTY.

EPA Reg. No. 1381-270

NET CONTENTS_____

Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589

EPA Est. No.:_____

2/0402/1

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, shoes plus socks and appropriate chemical-resistant gloves. Wear protective eyewear (goggles, face shield or safety glasses).

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes and socks
- Protective eyewear (goggles, face shield or safety glasses)

Mixers/loaders supporting aerial applications to canola, corn, cotton, and soybean must use closed mixing/loading systems.

User Safety Requirements

- 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:

- Remove clothing/PPE 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.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Environmental Hazards

DO NOT apply directly to water or to areas where surface water is present. **DO NOT** apply to intertidal areas below the mean high water mark. **DO NOT** contaminate water by cleaning of equipment or disposal of equipment washwater or rinsate.

This pesticide is toxic to vascular plants and must be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions, this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, including no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use vegetation filter strips along rivers, creeks, streams, wetlands, etc. or on the downhill side of fields where run-off could occur to minimize water runoff.

Pollinator Advisory Statement: This product contains an herbicide. Follow all label directions and precautions to minimize potential off-target exposure in order to prevent effects to non-target plants adjacent to the treated site which may serve as habitat or forage for pollinators.

Physical/Chemical Hazards

Do not mix with or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

Directions for Use

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

DO NOT use this product until you have read the entire label. **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.

In the State of New York Only: Not For Use In Nassau and Suffolk Counties.

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 intervals. 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 12 hours with the following exceptions:

- **The REI for workers engaged in scouting activities in corn, canola, and soybeans is 4 days.**
- **The REI for workers to move irrigation piping is 7 days for all crops.**

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, including plants, soil, or water, is:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical resistant gloves including barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils
- Protective eyewear (goggles, face shield or safety glasses)
- Chemical resistant footwear plus socks

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, or greenhouses.

DO NOT enter or allow others to enter treated areas until sprays have dried.

IMPORTANT CROP SAFETY INFORMATION
READ BEFORE USING THIS PRODUCT

Burndown treatments

For row crop applications in canola, corn, sweet corn, cotton, soybean or sugar beets, Total TNV may be applied to any variety as a **burndown treatment prior to planting or prior to crop emergence.**

Post emergent row crop applications

Post emergence row crop applications of Total TNV may be made only to crops resistant to glufosinate. The basis of selectivity of Total TNV in crops is the presence of a gene in glufosinate-resistant crops which results in a plant that is resistant to the active ingredient of Total TNV. **Crops not containing this gene will not be resistant to Total TNV and severe crop injury and/or death may occur. DO NOT allow spray to contact foliage or green tissue of desirable vegetation of crops that are not resistant to the active ingredient in this product.**

Total TNV may be applied to conventional or other transgenic cotton not resistant to the active ingredient in Total TNV using a hooded sprayer.

Tree, Nut, Vine and Berry Treatments

When applying Total TNV to apples, berries, tree nuts and vines, avoid contact of solution, spray, drift or mist with green bark, stems or foliage, as injury may occur. Only trunks with calloused, mature brown bark may be sprayed unless protected from spray contact by nonporous wraps, grow tubes or waxed containers. Contact of Total TNV with parts of trees, berries or vines other than mature brown bark can result in serious damage.

Spray Drift Management

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

Mandatory Spray Drift Requirements

Ground boom applications:

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.
- Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.
- For non-crop vegetation management ground applications, apply with the nozzle height no more than 4 feet above the ground or target vegetation, unless necessitated by the application equipment. Examples would include roadside, railroad, utility rights of way, forestry and other industrial vegetation management applications where safety or natural barriers obstruct application.

Aerial applications:

- When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.
- Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.
- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- When applying to crops via aerial application equipment, applicators must use ½ swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Spray Drift Advisories

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See **Wind, Temperature and Humidity, and Temperature Inversions** sections of this label.

Controlling Droplet Size – Ground Boom

- **Volume -** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure -** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

Controlling Droplet Size – Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.
- **Nozzle Type** - Solid stream nozzles (including disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - Longer booms increase drift potential. Therefore, a shorter boom length is recommended.
- **Application Height** - Application more than 10 ft. above the canopy increases the potential for spray drift.

Boom Height

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Wind

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator needs to be familiar be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

Product Information

Total TNV is a water-soluble non-selective, broad-spectrum herbicide used for control of annual and perennial grass and broadleaf weeds in a variety of crops. Uses include applications as foliar sprays in trees, vines and berry crops for control of emerged weeds; broadcast burndown applications prior to planting or crop emergence in labeled row crops; and as over-the-top applications in canola, corn, cotton, soybeans and sugar beets designated as glufosinate-resistant. Total TNV may be used for weed control in non glufosinate-resistant cotton when applied with a hooded sprayer in-crop. Total TNV may also be applied for potato vine desiccation.

Total TNV is only foliar-active with little or no activity in soil. Weeds that emerge after application will not be controlled.

Apply Total TNV to actively growing weeds as described in the **Weed Control for Row Crops** section to get maximum weed control. Uniform, thorough spray coverage is necessary to achieve consistent weed control. Necrosis of leaves and young shoots occur within 2 to 4 days after application under good growing conditions.

- Warm temperatures, high humidity, and bright sunlight improve the performance.
- Total TNV is rainfast four (4) hours after application to most weed species; therefore, rainfall within four (4) hours may necessitate retreatment or may result in reduced weed control.
- To avoid the possibility of reduced lambsquarters and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
- Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness.
- To maximize weed control, **DO NOT** cultivate from 5 days before an application to 7 days after an application.
- Consult your local Cooperative Extension Service or Winfield representative for guidelines on the optimum application timing for Total TNV in your region.

Rotational Crop Restrictions*

Rotational crop planting intervals following application of Total TNV are listed below. Failure to comply with these restrictions may result in illegal residues in rotated crops.

Rotational Crop	**Plant-back Interval** (Minimum Rotational Crop Planting Interval from Last Application)
Canola, Sweet Corn, Corn, Cotton, Soybeans, Sugar Beets	May be planted at any time
Root and Tuber Vegetables, Leafy Vegetables, Brassica Leafy Vegetables, Small Grains (barley, buckwheat, oats, rye, teosinte, triticale, and wheat).	70 Days
All Other Crops	180 Days

**See application directions for Potato Vine Desiccation for Rotational Crop Restrictions specifically after* Total TNV *applications to potatoes.*

Weed Resistance Management

For resistance management, Total TNV is a Group 10 herbicide. Any weed population may contain or develop plants naturally resistant to Total TNV and other Group 10 herbicides. Weed species with acquired resistance to Group 10 may eventually dominate the weed population if Group 10 herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Total TNV or other Group 10 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g. higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Fields should be scouted before application to identify the weed species present and their growth stage to determine if the intended application will be effective. Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include:
    1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
    2) a spreading patch of non-controlled plants of a particular weed species;
    3) surviving plants mixed with controlled individuals of the same species.

  If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action (MOA), if available. Treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes. To the extent possible do not allow weed escapes to produce seeds, roots, or tubers.
- Contact your local extension specialist, certified crop advisors, and/or Winfield Solutions, LLC representative for pesticide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.
- For further information or to report suspected resistance, contact your Winfield Solutions, LLC representative.

Weeds Controlled for Row Crops

Rates in fluid ounces of formulated product per acre. See the **Application and Mixing Procedures and the Crop Specific Use Instructions** sections of this label for specific use directions. In weed populations with mixed species, apply at a rate needed for the species targeting less than three-inch weeds.

Table 1. Broadleaf Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)

		Application Rate[4]	
Common Name	**Scientific Name**	**22 fl. oz./A (0.40 lb. a.i./A)**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Amaranth, Palmer	*Amaranthus palmeri*	Not Advised	C
Anoda, spurred	*Anoda cristata*	C	C
Beggarweed, Florida	*Desmodium tortuosum*	C	C
Black medic	*Medicago lupulina* L.	C	C
Blueweed, Texas	*Helianthus ciliaris* DC.	C	C
Buckwheat, wild	*Polygonum convolvulus*	C	C
Buffalobur	*Solanum cornutum*	C	C
Burcucumber	*Sicyos angulatus*	C	C
Canola, volunteer[1]	*Brassica* spp.	C_1	C_1
Carpetweed	*Mollugo verticillata*	C	C
Catchweed bedstraw (cleavers)	*Galium aparine* L.	C	C
Chickweed, common	*Stellaria media*	C	C
Cocklebur, common	*Xanthium strumarium*	C	C
Copperleaf, hophornbeam	*Acalypha ostryaefolia*	C	C
Cotton, volunteer[1]	*Gossypium* spp.	C_1	C_1
Croton, tropic	*Croton glandulosus*	C	C
Croton, woolly	*Croton capitatus*	C	C
Devil's claw	*Proboscidea louisiana*	C	C
Eclipta	*Eclipta alba*	C	C
Fleabane, annual	*Erigeron annuus*	C	C
Galinsoga, hairy	*Galinsoga ciliate*	C	C
Galinsoga, smallflower	*Galinsoga parviflora*	C	C
Geranium, cutleaf	*Geranium dissectum* L.	C	C
Groundcherry, cutleaf	*Physalis angulata*	C	C
Hempnettle	*Galeopsis* spp.	C	C
Horsenettle, Carolina[2]	*Solanum carolinense*	C_2	C_2
Jimsonweed	*Datura stramonium*	C	C
Knotweed	*Polygonum* spp.	C	C
Kochia	*Kochia scoparia*	C	C

Table 1. Broadleaf Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)

		Application Rate[4]	
Common Name	**Scientific Name**	**22 fl. oz./A (0.40 lb. a.i./A)**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Ladysthumb	*Polygonum persicaria*	C	C
Lambsquarters, common	*Chenopodium album*	C	C
Mallow, common	*Malva* spp.	C	C
Mallow, Venice	*Hibiscus trionum*	C	C
Marestail[3]	*Conyza canadensis*	S	C
Marsh elder, annual	*Iva annua*	C	C
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*	C	C
Morningglory, ivyleaf	*Ipomoea hederacea*	C	C
Morningglory, pitted	*Ipomoea lacunosa*	C	C
Morningglory, sharppod	*Ipomoea cordatotriloba*	C	C
Morningglory, smallflower	*Jacquemontia tamnifolia*	C	C
Morningglory, tall	*Ipomoea purpurea*	C	C
Mustard, wild	*Sinapis arvensis*	C	C
Nightshade, black	*Solanum nigrum*	C	C
Nightshade, eastern black	*Solanum ptycanthum*	C	C
Nightshade, hairy	*Solanum sarrachoides*	C	C
Pennycress	*Thlaspi arvense*	C	C
Pigweed, prostrate	*Amaranthus blitoides*	C	C
Pigweed, redroot	*Amaranthus retroflexus*	C	C
Pigweed, smooth	*Amaranthus hybridus*	C	C
Pigweed, spiny	*Amaranthus spinosus*	C	C
Pigweed, tumble	*Amaranthus albus*	C	C
Puncturevine	*Tribulus terrestris*	C	C
Purslane, common	*Portulaca oleracea*	C	C
Pusley, Florida	*Richardia scabra*	S	C
Ragweed, common	*Ambrosia artemisiifolia*	C	C
Ragweed, giant	*Ambrosia trifida*	C	C
Senna, coffee	*Cassia occidentalis*	C	C
Sesbania, hemp	*Sesbania herbacea*	C	C
Shepherd’s purse	*Capsella bursa-pastoris*	C	C
Sicklepod (java bean)	*Senna obtusifolia*	C	C
Sida, prickly	*Sida spinosa* L.	C	C

Table 1. Broadleaf Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)

		Application Rate[4]	
Common Name	**Scientific Name**	**22 fl. oz./A (0.40 lb. a.i./A)**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	C
Smell melon	*Cucumis melo* L. var. *dudaim*	C	C
Sowthistle, annual	*Sonchus oleraceus* L.	C	C
Soybeans, volunteer[1]	*Glycine max*	C_1	C_1
Spurge, prostrate	*Euphorbia humifusa*	C	C
Spurge, spotted	*Euphorbia maculata* L.	C	C
Starbur, bristly	*Acanthospermum hispidum*	C	C
Sunflower, common	*Helianthus annuus*	C	C
Sunflower, prairie	*Corythucha pura*	C	C
Sunflower, volunteer	*Helianthus annuus*	C	C
Thistle, Russian[2]	*Salsola kali*	S_2	C_2
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, common	*Amaranthus rudis*	Not Advised	C
Waterhemp, tall	*Amaranthus tuberculatus*	Not Advised	C

C= Control S= Suppress

1 Volunteer glufosinate-resistant crops from the previous season will not be controlled.
2 May require sequential applications for control
3 For optimum control apply Total TNV on 6-inch Marestail.
4 See the Crop Specific Use Instructions section of this label for maximum single application rates on a per crop/application timing basis.

Table 2. Grass Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)

		Application Rate[4]	
Common Name	**Scientific Name**	**22 fl. oz./A (0.40 lb. a.i./A)**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Barley, volunteer[3]	*Hordeum vulgare*	C_3	C_3
Barnyardgrass	*Echinochloa* spp.	C	C
Bluegrass, annual	*Poa annua* L.	C	C
Corn, volunteer[1]	*Zea mays* L.	C_1	C_1
Crabgrass, large[2]	*Digitaria sanguinalis*	C_2	C_2
Crabgrass, smooth[2]	*Digitaria ischaemum*	C_2	C_2
Cupgrass, woolly	*Eriochloa villosa*	C	C
Foxtail, bristly	*Setaria verticillata*	C	C

Table 2. Grass Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)

		Application Rate[4]	
Common Name	**Scientific Name**	**22 fl. oz./A (0.40 lb. a.i./A)**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Foxtail, giant	*Setaria faberi*	C	C
Foxtail, green	*Setaria viridis*	C	C
Foxtail, robust purple	*Setaria viridis*	C	C
Foxtail, yellow[2]	*Setaria pumila*	C_2	C_2
Goosegrass[3]	*Eleusine indica*	C_3	C_3
Johnsongrass, seedling	*Sorghum halepense*	C	C
Junglerice	*Echinochloa colonum*	C	C
Millet, proso volunteer	*Milium vernale*	C	C
Millet, wild proso	*Panicum miliaceum* L.	C	C
Oat, wild[2]	*Avena fatua*	C_2	C_2
Panicum, fall	*Panicum dichotomiflorum*	C	C
Panicum, Texas	*Panicum texanum*	C	C
Rice, red	*Oryza sativa* L.	C	C
Rice, volunteer[1]	*Oryza sativa*	C_1	C_1
Sandbur, field[2]	*Cenchrus pauciflorus*	S_2	C_2
Shattercane	*Sorghum vulgare* Pers.	C	C
Signalgrass, broadleaf	*Brachiaria platyphylla*	C	C
Sorghum, volunteer	*Sorghum* spp.	C	C
Sprangletop	*Leptochloa* spp.	C	C
Stinkgrass	*Eragrostis cilianensis*	C	C
Wheat, volunteer[2]	*Triticum* spp.	C_2	C_2
Witchgrass	*Panicum virgatum* L.	C	C

C= Control S = Suppress

1 Volunteer glufosinate-resistant crops from the previous season will not be controlled. A timely cultivation 7 to 10 days after an application and/or retreatment 10 to 21 days after the first application can be made for controlling dense clumps of volunteer corn or rice.

2 For best control of yellow foxtail, field sandbur, crabgrass, wild oats, and volunteer wheat, treat prior to tiller initiation.

3 A sequential application may be necessary for control.

4 See the Crop Specific Use Instructions section of this label for maximum single application rates on a per crop/application timing basis.

Table 3. Biennial and Perennial Weeds Controlled
(including glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin-resistant biotypes)
For control of the biennial and perennial weeds listed below, use tank mixes or sequential applications of Total TNV.

		Application Rate[1]
Common Name	**Scientific Name**	**29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)**
Alfalfa	*Medicago sativa* L.	C
Bermudagrass	*Cynodon dactylon*	C
Bindweed, field	*Convolvulus arvensis* L.	C
Bindweed, hedge	*Calystegia sepium*	C
Bluegrass, Kentucky	*Poa pratensis* L.	C
Blueweed, Texas	*Helianthus ciliaris* DC.	C
Bromegrass, smooth	*Bromus inermis*	C
Burdock	*Arctium* spp.	C
Bursage, woollyleaf	*Ambrosia grayi*	C
Chickweed, mouse-ear	*Cerastium vulgatum* L.	C
Clover, red	*Trifolium pratense* L.	C
Dandelion	*Taraxacum officinale*	C
Dock, smooth	*Rumex* spp.	S
Dogbane, hemp	*Apocynum cannabinum*	S
Goldenrod, gray	*Solidago nemoralis*	C
Johnsongrass, rhizome	*Sorghum halepense*	C
Milkweed, common	*Asclepias syriaca*	S
Milkweed, honeyvine	*Ampelamus albidus*	S
Muhly, wirestem	*Muhlenbergia frondosa*	S
Nightshade, silverleaf	*Solanum elaeagnifolium*	C
Nutsedge, purple	*Cyperus rotundus*	S
Nutsedge, yellow	*Cyperus ferax*	S
Orchardgrass	*Dactylis glomerata* L.	C
Poinsettia, wild	*Euphorbia heterophylla* L.	S
Pokeweed	*Phytolacca* L.	C
Quackgrass	*Agropyron repens*	C
Sowthistle, perennial	*Sonchus arvensis* L.	C
Thistle, bull	*Cirsium vulgare*	S
Thistle, Canada	*Cirsium arvense*	C
Timothy	*Phleum pratense* L.	S
Wormwood, biennial	*Artemisia biennis*	C

[1] See the Crop Specific Use Instructions section of this label for maximum single application rates on a per crop/application timing basis.

Application and Mixing Procedures

Uniform, thorough spray coverage is important to achieve consistent weed control.

Refer to the **Weeds Controlled for Row Crops** tables and the **Crop Specific Use Directions** for application rates.

See the **Spray Drift Management** section for additional information on proper application of Total TNV.

Restriction: DO NOT use flood jet nozzles, controlled droplet application equipment, or air-assisted spray equipment.

Ground Application
Apply early when weeds are small. Apply in a minimum of 15 gallons of water per acre. Increase to a maximum of 20 gallons of water per acre if dense weed canopy exists or as required by climatic conditions.

Aerial Application
Apply early when weeds are small in a minimum of 10 gallons per acre.

Compatibility Testing
If Total TNV will be mixed with other pesticide products, test the compatibility of the intended tank mixture before mixing the products in the spray tank. The following procedure assumes a spray volume of 25 gallons per acre. For other spray volumes, adjust the amount of the water used accordingly. Check compatibility using this process:

1) In a clear 1-quart jar, place 1.0 pint of water from the source that will be used to prepare the spray solution.
2) For each pound of a dry tank mix partner to be applied per acre, add 1.5 teaspoons to the jar.
3) For each 16 fl. oz. of a liquid tank mix partner to be applied per acre, add 0.5 teaspoon to the jar.
4) For each 16 fl. oz. of Total TNV to be applied per acre, add 0.5 teaspoon to the jar.
5) After adding all the ingredients, place a lid on the jar and tighten, then invert 10 times to mix.
6) Allow the mixture to stand for 15 minutes, then evaluate the solution for uniformity and stability. Look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. If the tank mix partners are not compatible, **DO NOT** use the mixture in a spray tank.
7) Once compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section of this label.

Mixing Instructions
Tank Mix Instructions: Total TNV may be applied in tank mix combinations with other products provided these other products are labeled for the timing and method of application for the crop to be treated. No label dosage rates can be exceeded. Total TNV cannot be mixed with any product containing a label prohibition against such mixing. Refer to specific crop sections for rates and other restrictions.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Total TNV must be applied with properly calibrated and clean equipment. Total TNV is formulated to mix readily in water. Prior to adding this product to the spray tank, ensure that the spray tank is thoroughly clean, particularly if a herbicide with the potential to injure crops was previously used (see **Cleaning Instructions**).

Mix Total TNV with water to make a finished spray solution as follows:

1) Fill the spray tank half full with water.
2) Begin agitation.
3) If mixing with a flowable/wettable powder tank mix partner, prepare a slurry of the proper amount of the product in a small amount of water. Add the slurry to the spray tank.
4) Add the appropriate amount of ammonium sulfate (AMS) to the spray tank.
5) If mixing with a liquid tank mix partner, add the liquid mix partner next.
6) Complete filling the spray tank with water, before adding Total TNV, as foaming may occur.
7) Add the proper amount of Total TNV and continue agitation.
8) If foaming occurs, use a silicone-based antifoam agent.

Ensure that all spray system lines including pipes, booms, etc. have the correct concentration of spray solution by flushing out the spray system lines before starting the crop application.

If tank mix partners are added, maintain good agitation at all times until contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep bypass line on or near bottom of tank to minimize foaming. Screen size in nozzles or line strainers must be 50 mesh or larger.

Cleaning Instructions

Before using Total TNV, thoroughly clean bulk storage tank, refillable tank, nurse tanks, spray tank, lines, and filter particularly if an herbicide with the potential to injure crops was previously used. Equipment must be thoroughly rinsed using a commercial tank cleaner and as instructed on the prior herbicide label.

After using Total TNV, triple rinse the spray equipment and clean with a commercial tank cleaner before using the equipment for a new application. Make sure any rinsate or foam is thoroughly removed from spray tank and boom. Rinsate may be disposed following the pesticide disposal directions on this label.

Crop Specific Use Directions

The following tables indicate use patterns, rates, minimum spray volumes, preharvest intervals and other precautions, restrictions and comments specific to each crop. Read and follow directions carefully.

APPLICATION DIRECTIONS FOR BURNDOWN USE

Total TNV may be applied as a burndown treatment prior to planting or prior to emergence of canola, corn, sweet corn, cotton, soybean, sugar beet, glufosinate-resistant canola, glufosinate-resistant corn, glufosinate-resistant sweet corn, or glufosinate-resistant soybean.

Application Directions

Application Timing	• Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the **Weed Control for Row Crops** section. • For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. • Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. • To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
Application Use Rate	• Apply 29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A) depending on crop, weed species and intention of post application use. Please see application charts below.
Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of surfactants may be included. Please refer to the surfactant label for more detailed information.
Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.

	• See nozzle section in the **Spray Drift Management** section for more detailed information
Rainfast	• 4 hours

Table 4. Burndown Application Directions for Conventional and non Glufosinate-resistant Crops

Crop	Burndown Rate	In-Crop (post-emergent) Application Rate	Annual Max
Canola, Corn, Sweet Corn, Soybean	29 – 43 fl. oz./A[1] (0.53 - 0.79 lb. a.i./A)	None	43 fl. oz./A[1] (0.79 lb. a.i./A)
Sugar Beet	29 – 36 fl. oz./A (0.53 - 0.66 lb. a.i./A)	None	36 fl. oz./A (0.66 lb. a.i./A)
Cotton Use Scenario 1	30 – 43 fl. oz/A (0.55 - 0.79 lb. a.i./A)	1 application at 29 fl. oz/A (0.53 lb. a.i./A) In-crop application to non glufosinate-resistant cotton must be made with a hooded sprayer	72 fl. oz./A (1.32 lb. a.i./A)
Cotton Use Scenario 2	29 fl. oz./A (0.53 lb. a.i./A)	2 applications at 29 fl. oz/A (0.53 lb. a.i./A) In-crop application to non glufosinate-resistant cotton must be made with a hooded sprayer	87 fl. oz./A (1.59 lb. a.i./A)

[1]**In California,** the maximum single burndown application rate for canola, corn, soybean and sweet corn is 36 fl. oz./A (0.66 lb. a.i./A) with an annual maximum rate of 36 fl. oz./A (0.66 lb. a.i./A).

Restrictions to the Directions for Burndown Use for Conventional or non Glufosinate-resistant Crops:

- **Canola, Corn, Sweet Corn, Soybean**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A)[1] of Total TNV per burndown application.
  - **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A)[1] of Total TNV per year.
  - **DO NOT** make in-crop applications of Total TNV.

  [1]**In California,** the maximum burndown application rate for canola, corn, sweet corn and soybeans is 36 fl. oz./A (0.66 lb. a.i./A) with an annual maximum of 36 fl. oz./A (0.66 lb. a.i./A).
- **Sugar Beet**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 36 fl. oz./A (0.66 lb. a.i./A) of Total TNV per burndown application.
  - **DO NOT** make in-crop applications of Total TNV.
- **Cotton (Use Scenario 1):**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 43 fl. oz./A (0.79 lb. ai/A) of Total TNV per burndown application.
  - **DO NOT** exceed a total of 2 applications of Total TNV, including all application timings, per year. If a burndown treatment was applied at a rate greater than 29 fl. oz./A (0.53 lb. ai/A), only 1 in-crop application at 29 fl. oz./A (0.53 lb. ai/A) may be applied.
  - **DO NOT** apply more than 72 fl. oz./A (1.32 lb. a.i./A) of Total TNV, including all application timings, per year.
  - If intending to apply an in-crop application, see additional use instructions and restrictions in the **APPLICATION DIRECTIONS FOR USE ON COTTON** section of this label.
- **Cotton (Use Scenario 2):**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 29 fl. oz/A (0.53 lb. a.i./A) of Total TNV per application.
  - **DO NOT** exceed a total of 3 applications of Total TNV, including all application timings, per year. If a burndown treatment of 29 fl. oz./A (0.53 lbs. a.i./A) of Total TNV was applied, only 2 in-crop applications at 29 fl. oz./A (0.53 lb. ai/A) may be applied.
  - Sequential in-crop applications must be made a minimum of 10 days apart.

- **DO NOT** apply more than 87 fl. oz./A (1.59 lb. a.i./A) of Total TNV, including all application timings, per year.
- If intending to apply an in-crop application, see additional use instructions and restrictions in the **APPLICATION DIRECTIONS FOR USE ON COTTON** section of this label.

Table 5. Application Directions for Glufosinate-resistant Crops

Glufosinate-resistant Crop	Burndown Rate	In-crop (post emergent) Application Rate (Glufosinate-resistant varieties only)	Annual Max
Soybean	29 – 43 fl. oz./A[1] (0.53 - 0.79 lb. a.i./A)	Up to 2 applications at 29 to 43 fl. oz./A[1] (0.53 - 0.79 lb. a.i./A)	87 fl. oz/A[1] (1.59 lb. a.i./A)
Field Corn	29 – 43 fl. oz./A[2] (0.53 - 0.79 lb. a.i./A)	Up to 2 applications at 29 to 43 fl. oz./A[2] (0.53 - 0.79 lb. a.i./A)	87 fl. oz/A[2] (1.59 lb. a.i./A)
Sweet Corn Not for use in California	29 – 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)	**If a burndown treatment is applied:** None	43 fl. oz/A (0.79 lb. a.i./A)
		If no burndown treatment is applied: 2 applications at 22 fl. oz./A (0.40 lb. a.i./A)	44 fl. oz./A (0.80 lb. a.i./A)
Canola	29 – 43 fl. oz./A[1] (0.53 - 0.79 lb. a.i./A)	Up to 2 applications at 22 - 29 fl. oz./A (0.40 -0.53 lb. ai/A)	87 fl. oz./A[1] (1.59 lb. a.i./A)
Cotton Use Scenario 1	30 – 43 fl. oz./A (0.55 - 0.79 lb. a.i./A)	1 application at 29 fl. oz./A (0.53 lb. a.i./A)	72 fl. oz./A (1.32 lb. a.i./A)
Cotton Use Scenario 2	29 fl. oz./A (0.53 lb. a.i./A)	2 applications at 29 fl. oz./A (0.53 lb. a.i./A)	87 fl. oz./A (1.59 lb. a.i./A)

[1]**In California,** the maximum single application rate for soybeans and canola is 36 fl. oz./A (0.66 lb. a.i./A) with an annual maximum, including all application timings, of 72 fl. oz./A (1.32 lbs. a.i./A).
[2]**In California,** for field corn, if a burndown application is to be followed by an in-crop application the maximum single application rate is 22 fl. oz./A (0.40 lbs. a.i./A) with annual maximum of 44 fl. oz./A (0.8 lbs. a.i./A).

Glufosinate-resistant Crops Restrictions to the Directions for Burndown Use

- **Glufosinate-resistant Soybeans and Canola:**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 43 fl. oz./A[1] (0.79 lb. a.i./A) of Total TNV in a single application.
  - **DO NOT** apply more than 87.0 fl. oz/A[2] (1.59 lb. a.i./A) of Total TNV, including all application timings, per year.
  - **DO NOT** exceed a total of 3[2] applications of Total TNV, including all application timings (1 burndown application and up to 2 in-crop applications), per year.
  - Sequential in-crop applications must be made a minimum of 5 days apart for soybeans, and 7 days apart for canola.
  - If intending to apply in-crop application(s), see additional use instructions and restrictions in the specific glufosinate-resistant crop instruction of the label.

[1]**In California,** the maximum single application rate for soybeans and canola is 36 fl. oz./A (0.66 lb. a.i./A).
[2]**In California,** the annual maximum for soybeans and canola is 72 fl. oz./A (1.32 lbs. a.i./A), including all application timings. Adjust the maximum number of applications allowed per year accordingly.

- **Glufosinate-resistant field corn**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 43 fl. oz./A[1] (0.79 lb. a.i./A) of Total TNV in a single application.
  - **DO NOT** apply more than 87.0 fl. oz/A[2] (1.59 lb. a.i./A) of Total TNV, including all application timings, per year.
  - **DO NOT** exceed a total of 3[2] applications of Total TNV, including all application timings (1 burndown application and up to 2 in-crop applications), per year.
  - Sequential in-crop applications must be made a minimum of 7 days apart for field corn.
  - If intending to apply in-crop application(s), see additional use instructions and restrictions in the specific glufosinate-resistant crop instruction of the label.

  [1]**In California**, for field corn, if a burndown application is to be followed by an in-crop application the maximum single application rate is 22 fl. oz./A (0.40 lbs. a.i./A).

  [2]**In California,** the annual maximum for field corn is 44 fl. oz./A (0.8 lbs. a.i./A), including all application timings. Adjust the maximum number of applications allowed per year accordingly.
- **Glufosinate-resistant Sweet Corn:**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** make in-crop applications to sweet corn if Total TNV was used in a burndown application.
  - **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A) per burndown application.
  - If a burndown treatment was made, **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A) of Total TNV per year.
  - If no burndown treatment is intended, see the **APPLICATION DIRECTIONS FOR USE ON GLUFOSINATE-RESISTANT SWEET CORN** section of this label for in-crop use instructions and restrictions.
  - Sweet Corn is not a Registered Use in California.
- **Glufosinate-resistant Cotton (Use Scenario 1):**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A) of Total TNV per application.
  - **DO NOT** exceed a total of 2 applications of Total TNV, including all application timings, per year. If a burndown treatment was applied at a rate greater than 29 fl. oz./A (0.53 lb. a.i./A), only 1 in-crop application at 29 fl. oz./A (0.53 lb. a.i./A) may be applied.
  - Sequential applications must be made a minimum of 10 days apart.
  - **DO NOT** apply more than 72 fl. oz/A (1.32 lb. a.i./A) of Total TNV, including all application timings, per year.
  - If intending to apply an in-crop application, see additional use instructions and restrictions in the **APPLICATION DIRECTIONS FOR USE ON COTTON** section of this label.
- **Glufosinate-resistant Cotton (Use Scenario 2):**
  - **DO NOT** make more than 1 burndown application per year.
  - **DO NOT** apply more than 29 fl. oz./A (0.53 lb. a.i./A) of Total TNV per application.
  - **DO NOT** exceed a total of 3 applications of Total TNV, including all application timings, per year. If a burndown treatment of 29 fl. oz./A (0.53 lb. a.i./A) was applied, only 2 in-crop applications at 29 fl. oz/A (0.53 lb. a.i./A) may be applied.
  - Sequential in-crop applications must be made a minimum of 10 days apart.
  - **DO NOT** apply more than 87.0 fl. oz./A (1.59 lb. a.i./A) of Total TNV, including all application timings, per year.
  - If intending to apply in-crop (post emergent) application(s), see additional use instructions and restrictions in the **APPLICATION DIRECTIONS FOR USE ON COTTON** section of this label.

APPLICATION DIRECTIONS FOR USE ON GLUFOSINATE-RESISTANT CANOLA

Apply in-crop (post emergent) applications **ONLY** to glufosinate-resistant canola. Uniform thorough spray coverage is necessary to achieve optimum weed control.

Application Directions

Application Timing	• Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the **Weed Control for Row Crops** section. • For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. • Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. • To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
Application Window	• Cotyledon up to early bolt stage of glufosinate-resistant canola. • Slight discoloration of the canola may be visible after application. This effect is temporary and will not influence crop growth, maturity or yield.
Application Use Rate	• Apply 22 to 29 fl. oz./A (0.40 - 0.53 lb. a.i./A) depending on weed species, size and density per weed chart. If necessary, a second application up to 29 fl. oz./A (0.53 lb. a.i./A) can be applied a minimum of 7 days after the first application.
Maximum Annual Rate	• 87 fl. oz./A/year (1.59 lb. a.i./A/year) • In California, the maximum annual rate for canola is 72 fl. oz./A/year (1.32 lbs. a.i./A/year).
Application Rate with Tank Mix Partners	• Tank mix partners may aid in the performance of Total TNV. • Apply 22 to 29 fl. oz./A (0.40 - 0.53 lb. a.i./A) of Total TNV depending weed species, size and density per weed chart. If necessary, a second application up to 29 fl. oz./A (0.53 lb. a.i./A) can be applied a minimum of 7 days after the first application. • The tank mix partner must be labeled for the timing and method of application for the canola to be treated. • The tank mix partner must be used in accordance with the label limitations and precautions. • No dosage rates may be exceeded and Total TNV cannot be mixed with any product containing a label prohibition against such mixing.
Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.
Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1. • See nozzle section in the **Spray Drift Management** section for more detailed information.
Rainfast	• 4 hours

Restrictions to the Directions for Use on Glufosinate-resistant Canola:

- **DO NOT** use on glufosinate-resistant canola in the states of Alabama, Delaware, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.
- **Pre-harvest Interval (PHI): DO NOT** apply Total TNV within 65 days of harvesting glufosinate-resistant canola.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** apply Total TNV if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply more than 29 fl. oz./A (0.53 lb. a.i./A) of Total TNV in a single in-crop application.
- **DO NOT** apply more than 87 fl. oz./A (1.59 lbs. a.i./A)[1] of Total TNV per year.
- **DO NOT** apply more than 2[1] in-crop applications of Total TNV per year.
- Sequential in-crop applications must be made a minimum of 7 days apart.
- **DO NOT** exceed a total of 3[1] applications, including all application timings (one burndown application and up to 2 in-crop applications), of Total TNV per year.
- Refer to **Rotational Crop Restrictions** under the **Product Information** section of this label for the appropriate rotational crop plant-back intervals.

[1]**In California,** the maximum annual rate for canola is 72 fl. oz./A/year (1.32 lbs. a.i./A/year), including all application timings. Adjust the maximum number of applications allowed per year accordingly.

APPLICATION RATE AND TIMING FOR GLUFOSINATE-RESISTANT CANOLA SEED PROPAGATION

Not a Registered Use in California

Up to 3 applications of Total TNV at up to 29 fl. oz/A (0.53 lb. a.i./A) per application may be made to glufosinate-resistant canola for seed propagation. Applications may be made from the cotyledon stage up to the early bolting stage (e.g., BBCH 18-30, between just prior to stem elongation/bolting, 8 or more leaves and beginning of stem elongation, no internodes).

Restrictions to the Directions for Use on Glufosinate-resistant Canola for Seed Propagation:

- **DO NOT** apply more than 3 applications of Total TNV at up to 29.0 fl. oz./A (0.53 lb. a.i./A) per application per year.
- Sequential applications must be made a minimum of 7 days apart.
- **DO NOT** apply more than 87.0 fl. oz/A (1.59 lbs. a.i./A) of Total TNV per year.
- **DO NOT** apply Total TNV beyond the early bolting stage or within 65 days of harvesting canola seed.
- **DO NOT** use treated canola seed for food, feed or oil purposes.
- **DO NOT** apply Total TNV if canola shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply this product through any type of irrigation system.
- Glufosinate-resistant canola seed propagation is not a registered use in California.

APPLICATION DIRECTIONS FOR USE ON GLUFOSINATE-RESISTANT FIELD AND SILAGE CORN

Apply in-crop (post emergent) applications **ONLY** to glufosinate-resistant corn. Uniform thorough spray coverage is necessary to achieve optimum weed control.

Application Directions

Application Timing	• Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the **Weed Control for Row Crops** section. • For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. • Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. • To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
Application Window	• Emergence through V6 stage of growth. • Applications may also be made to glufosinate-resistant corn with drop nozzles from emergence until corn is 36 inches tall. Avoid spraying into whorl or leaf axils of the corn stalks.
Application Use Rate	• Apply 29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)***** depending on weed species , size and density per weed chart. If necessary, a second application of 29 to 43 fl. oz./A (0.53-0.79 lb. a.i./A)* can be applied a minimum of 7 days after the first application. *****In California, the maximum in-crop use rate is 22 fl. oz./A (0.40 lb. ai./A).
Maximum Annual Rate	• 87.0 fl. oz./A/year (1.59 lb. a.i./A/year) • In California, the maximum annual rate is 44 fl. oz./A/year (0.80 lb. a.i./A./year)
Application Rate with Tank Mix Partners	• Tank mix partners may aid in the performance of Total TNV. • Apply 29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)***** weed species, size and density per weed chart. If necessary, a second application 29 to 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)***** can be applied a minimum of 7 days after the first application. *****In California, the maximum in-crop use rate is 22 fl. oz./A (0.40 lb. ai./A). • The tank mix partner must be labeled for the timing and method of application for the corn to be treated. • The tank mix partner must be used in accordance with the label limitations and precautions. • No dosage rates may be exceeded and Total TNV cannot be mixed with any product containing a label prohibition against such mixing.
Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.
Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1.

	• See nozzle section in the **Spray Drift Management** section for more detailed information.
Rainfast	• 4 hours

Restrictions to the Directions for Use on Glufosinate-resistant Field and Silage Corn:

- **Pre-harvest Interval (PHI): DO NOT** apply Total TNV within 60 days of harvesting corn forage and within 70 days of harvesting corn grain and corn fodder.
- **DO NOT** apply more than 43 fl. oz./A[1] (0.79 lb. a.i./A) Total TNV in a single in-crop application.
- Sequential in-crop applications must be made a minimum of 7 days apart.
- **DO NOT** apply more than 87.0 fl. oz./A[2] (1.59 lb. a.i./A) of Total TNV on corn, including all application timings, per year.
- **DO NOT** apply more than 2[2] in-crop applications of Total TNV per year.
- **DO NOT** exceed a total of 3[2] applications, including all application timings (1 burndown application and up to 2 in-crop applications), of Total TNV on corn per year.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply Total TNV if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply Total TNV through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.

[1] **In California,** the maximum in-crop single application rate is 22 fl. oz/A (0.40 lb. a.i./A).

[2] **In California,** the maximum annual rate is 44 fl. oz./A/year (0.80 lb. a.i./A/year), including all application timings. Adjust the maximum number of applications allowed per year accordingly.

APPLICATION DIRECTIONS FOR USE ON GLUFOSINATE-RESISTANT SWEET CORN
Not a Registered Use in California

Apply in-crop (post emergent) applications **ONLY** to glufosinate-resistant sweet corn. Uniform thorough spray coverage is necessary to achieve optimum weed control.

Application Directions

Application Timing	• Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the **Weed Control for Row Crops** section. • For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. • Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. • To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
Application Window	• Emergence through V6 stage of growth.
Application Use Rate	• Apply 22 fl. oz./A (0.40 lb. a.i./A) depending on weed species, size and density per weed chart. If necessary, a second application of 22 fl. oz/A (0.40 lb. a.i./A) can be applied a minimum of 7 days after the first application.
Maximum Annual Rate	• 44 fl. oz./A/year (0.80 lb. a.i./A/year)
Application Rate with Tank Mix Partners	• Tank mix partners may aid in the performance of Total TNV. • Apply 22 fl. oz./A (0.40 lb. a.i./A) depending on crop, weed species, size and density per weed chart. If necessary, a second application 22 fl. oz./A (0.40 lb. a.i./A) can be applied a minimum of 7 days after the first application. • The tank mix partner must be labeled for the timing and method of application for the sweet corn to be treated. • The tank mix partner must be used in accordance with the label limitations and precautions.

	• No dosage rates may be exceeded and Total TNV cannot be mixed with any product containing a label prohibition against such mixing.
Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.
Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1. • See nozzle section in the **Spray Drift Management** section for more detailed information.
Rainfast	• 4 hours

Restrictions to the Directions for Use on Glufosinate-resistant Sweet Corn:

- **Pre-harvest Interval (PHI): DO NOT** apply Total TNV within 50 days of harvesting sweet corn ears and within 55 days of harvesting stover.
- If Total TNV was used in a burndown application, **DO NOT** make in-crop applications.
- **DO NOT** apply more than 22 fl. oz./A (0.4 lb. a.i./A) of Total TNV in a single in-crop, application.
- **DO NOT** apply more than 2 in-crop applications of Total TNV to sweet corn per year.
- Sequential in-crop applications must be made a minimum of 7 days apart.
- **DO NOT** apply more than 44.0 fl. oz./A (0.8 lb. a.i./A) of Total TNV on sweet corn per year.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply Total TNV if corn shows injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply Total TNV through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.
- In-crop applications to glufosinate-resistant sweet corn is not a registered use in California.

APPLICATION DIRECTIONS FOR USE ON COTTON
(GLUFOSINATE-RESISTANT COTTON AND NON GLUFOSINATE-RESISTANT COTTON*)

Uniform, thorough spray coverage is necessary to achieve consistent weed control.

Glufosinate-resistant Cotton: Total TNV may be applied as a broadcast, over-the-top, in-crop (post emergent) spray or as a directed spray **ONLY** to glufosinate-resistant cotton.

***Non Glufosinate-resistant Cotton:** Application of Total TNV to **non glufosinate-resistant cotton requires the use of hooded spray equipment** designed to minimize exposure of the spray to the cotton stand. See **Hooded Sprayer Application Instructions** in this section of the label for further information.

Application Directions

<table>
<tr><td>Application Timing</td><td>

Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the Weed Control for Row Crops section.
For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV.
Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness.
To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.

</td></tr>
<tr><td>Application Window</td><td>

Emergence up to early bloom.

</td></tr>
<tr><td rowspan="5">Application Use Rate Scenario 1
(2 in-crop applications)</td><td>

Apply 30 to 43 fl. oz./A (0.55 - 0.79 lb. a.i./A) in the first application depending on weed species, size and density per weed chart.
If necessary, a second application of 29 fl. oz./A (0.53 lb. a.i./A) can be applied a minimum of 10 days after the first application.

</td></tr>
<tr><td>Application Use Rate Scenario 1</td></tr>
<tr><td>
<table>
<tr><th>1st Application</th><th>2nd Application</th><th>Maximum per year</th></tr>
<tr><td>30 - 43 fl. oz./A
(0.55 - 0.79 lb. a.i./A)</td><td>29 fl. oz./A
(0.53 lb. a.i./A)</td><td>72 fl. oz./A
(1.32 lb. a.i.)</td></tr>
</table>
</td></tr>
<tr><td></td></tr>
<tr><td></td></tr>
<tr><td rowspan="5">Application Use Rate Scenario 2
(3 post applications)</td><td>

Apply 29 fl. oz./A (0.53 lb. a.i./A) per application depending on weed species, size and density per weed chart.
If necessary, a second application of 29 fl. oz./A (0.53 lb. a.i./A) can be applied, followed by a third application of 29 fl. oz./A (0.53 lb. a.i./A).
The sequential applications must be made a minimum of 10 days up to 14 days after each other.

</td></tr>
<tr><td>Application Use rate Scenario 2</td></tr>
<tr><td>
<table>
<tr><th>1st Application</th><th>2nd Application</th><th>3rd Application</th><th>Maximum per year</th></tr>
<tr><td>29 fl. oz./A
(0.53 lb. a.i./A)</td><td>29 fl. oz./A
(0.53 lb. a.i./A)</td><td>29 fl. oz./A
(0.53 lb. a.i./A)</td><td>87 fl. oz./A
(1.59 lb. a.i./A)</td></tr>
</table>
</td></tr>
<tr><td></td></tr>
<tr><td></td></tr>
<tr><td>Application Rate with Tank Mix Partners</td><td>

Tank mix partners may aid in the performance of Total TNV.
The tank mix partner must be labeled for the timing and method of application for the cotton to be treated.
The tank mix partner must be used in accordance with the label limitations and precautions.
No dosage rates may be exceeded and Total TNV cannot be mixed with any product containing a label prohibition against such mixing.

</td></tr>
</table>

Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.
Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1. • See nozzle section in the **Spray Drift Management** section for more detailed information.
Rainfast	• 4 hours

Hooded Sprayer Application Instructions for Non Glufosinate-resistant Cotton:
Application of Total TNV to non glufosinate-resistant cotton varieties requires the use of hooded spray equipment designed to minimize exposure of the spray to the cotton stand. A hooded sprayer directs the spray onto weeds, while shielding the cotton stand from contact. Use nozzles that provide uniform coverage within the treated area. Keep hoods on these sprayers adjusted to protect desirable vegetation. Extreme care must be exercised to avoid exposure of the desirable vegetation to the spray.

With a hooded sprayer, the spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground. If the hoods are raised, spray particles may escape and come into contact with the cotton, causing damage or destruction of the crop.

Herbicide rates and spray volume instructions are presented as broadcast equivalents and must be reduced in proportion to the area actually treated. Use the following formulas to calculate the correct rate and volume per planted (field) acre:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast RATE per acre} = \text{Amount of banded product needed per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast spray VOLUME per acre} = \text{Banded spray volume needed per acre}$$

Post-Harvest – Fall Burndown:
Total TNV may be applied as a post-harvest burndown treatment to fields (after cotton harvest). Up to 43.0 fl. oz./A (0.79 lb. a.i./A) of Total TNV may be applied in a single application to control larger weeds growing in the crop at the time of harvest. If more than 29.0 fl. oz. (0.53 lb. a.i./A) is used in a single application, the annual total must not exceed 72.0 fluid ounces per acre (1.32 lb. a.i./A), including all application timings. Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.

Restrictions to the Directions for Use on Glufosinate-Resistant Cotton and Non Glufosinate-Resistant Cotton:

- **DO NOT** apply Total TNV to **Glufosinate-Resistant Cotton** in Florida, South of Tampa (Florida Route 60), or in Hawaii, except for test plots or breeding nurseries.
- **Pre-harvest Interval (PHI): DO NOT** apply Total TNV within 70 days prior to cotton harvest.
- **Use Scenario 1**

- **DO NOT** exceed 2 applications of Total TNV, including all application timings, to cotton per year when using this application scenario.
- Sequential in-crop applications must be made a minimum of 10 days apart.
- **DO NOT** apply more than 43.0 fl. oz./A (0.79 lb. a.i./A) of Total TNV in a single application under this use scenario. If a single application greater than 29.0 fl. oz. (0.53 lb. a.i./A) is made, a subsequent application not to exceed 29.0 fluid ounces (0.53 lb. a.i./A) may be made to cotton.
- **DO NOT** apply more than 72 fl. oz./A (1.32 lbs. a.i./A) of Total TNV, including all application timings, to cotton per year under this application scenario.

- **Use Scenario 2**:
  - **DO NOT** exceed 3 applications of Total TNV, including all application timings, to cotton per year when using this application scenario.
  - Sequential in-crop applications must be made a minimum of 10 days apart
  - **DO NOT** apply more than 29 fl. oz./A (0.53 lb. a.i./A) per application when using this application scenario.
  - **DO NOT** apply more than 87 fl. oz./A (1.59 lbs. a.i./A) of Total TNV, including all application timings, to cotton per year under this application scenario.
- **DO NOT** apply Total TNV through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.

APPLICATION DIRECTIONS FOR USE ON GLUFOSINATE-RESISTANT SOYBEANS

Apply in-crop (post emergent) applications **ONLY** to glufosinate-resistant soybeans. Uniform thorough spray coverage is necessary to achieve optimum weed control.

Application Directions

Application Timing	• Apply to small and actively growing weeds, targeting less than 3-inch weeds in height. For additional information on weed heights refer to the **Weed Control for Row Crops** section. • For best results, warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. • Weed control may be reduced if application is made when heavy dew, fog, and mist/rain are present; or when weeds are under stress due to environmental conditions including drought, cool temperatures, or extended periods of cloudiness. • To avoid the possibility of reduced lambsquarters, Palmer amaranth and velvetleaf control, applications must be made between dawn and 2 hours before sunset.
Application Window	• Emergence up to bloom or R1 growth stage.
Application Use Rate	• Apply 29 - 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)* depending weed species, size and density per weed chart. If necessary, a second application of 29 - 43 fl. oz./A (0.53 - 0.79 lb. a.i./A)* can be applied a minimum of 5 days after the first application. *In California, the maximum single application rate is 36 fl. oz./A (0.66 lb. a.i./A).
Maximum Annual Rate	• 87 fl. oz./A/year (1.59 lb. a.i./A/year) • In California, the maximum annual rate for soybeans is 72 fl. oz./A/year (1.32 lb. a.i./year).
Application Rate with Tank Mix Partners	• Tank mix partners may aid in the performance of Total TNV. • The tank mix partner must be labeled for the timing and method of application for the soybean to be treated. • The tank mix partner must be used in accordance with the label limitations and precautions. • No dosage rates may be exceeded and Total TNV cannot be mixed with any product containing a label prohibition against such mixing.
Adjuvant	• Ammonium sulfate (AMS) can be used at 1.5 lb./A to 3 lb./A. Rates are dependent on tank mix partners, environmental conditions, temperatures and potential for leaf burn. • AMS has shown to improve weed control of difficult-to-control weeds, like velvetleaf and lambsquarters, under difficult environmental conditions (low relative humidity) or hard water. • Anti-foam agent is advised.
Surfactants/Oils	• The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information.

Spray Volume	• 15 GPA minimum • If dense canopy, large weeds or unfavorable growing conditions are present, increase water volume to 20 GPA.
Nozzle Spray Quality	• Total TNV is a contact herbicide and requires proper nozzles with uniform thorough spray coverage to achieve optimum weed control. • Select nozzle and pressure that deliver medium to coarse spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with ASABE Standard 572.1. • See nozzle section in the **Spray Drift Management** section for more detailed information.
Rainfast	• 4 hours

Restrictions to the Directions for Use on Glufosinate-resistant Soybeans:

- **Pre-Harvest Interval (PHI): DO NOT** apply Total TNV within 70 days of harvesting soybean seed.
- **DO NOT** apply more than 43 fl. oz./A (0.79 lb. a.i./A)[1] of Total TNV in a single in-crop (post emergent) application.
- **DO NOT** apply more than 87 fl. oz./A (1.59 lbs. a.i./A)[2] of Total TNV on soybeans, including all application timings, per year.
- **DO NOT** apply more than 2[2] in-crop applications of Total TNV per year.
- Sequential in-crop applications must be made a minimum of 5 days apart.
- **DO NOT** exceed a total of 3[2] applications, including all application timings (one burndown application and up to 2 in-crop applications), of Total TNV per year.
- **DO NOT** graze the treated crop or cut for hay.
- **DO NOT** use nitrogen solutions as spray carriers.
- **DO NOT** apply Total TNV if soybeans show injury from prior herbicide applications or environmental stress (drought, excessive rainfall, etc.).
- **DO NOT** apply Total TNV through any type of irrigation system.
- Refer to the **Rotational Crop Restrictions** section under the **Product Information** heading of this label for the appropriate rotational crop plant back intervals.

[1]**In California**, the maximum single application rate for soybeans is 36 fl. oz./A (0.66 lb. a.i./A).

[2]**In California**, the maximum annual rate for soybeans is 72 fl. oz./A/year (1.32 lbs. a.i./A/year), including all application timings. Adjust the maximum number of applications allowed per year accordingly.

APPLICATION DIRECTIONS FOR GLUFOSINATE-RESISTANT CANOLA, CORN, COTTON, AND SOYBEAN SEED PROPAGATION

Total TNV may be applied to select out susceptible "segregates", i.e., canola, corn, cotton, and soybean plants that are not resistant to glufosinate- ammonium during seed propagation.

- **Glufosinate-resistant Canola:**
  Total TNV may also be used in canola seed propagation as a foliar spray to selectively eliminate canola plants that do not carry a gene that imparts resistance to glufosinate-ammonium, and as such, can be applied to remove susceptible segregates during canola seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide. See application use directions for use on canola for use rates and application timing.

- **Glufosinate-resistant Corn:**
  Inbred lines, plants not possessing glufosinate-ammonium resistance, will be severely injured or killed if treated with this herbicide. A hooded sprayer may be used to protect plants from coming into contact with the herbicide application. For the selection of resistant corn "segregates", Total TNV may be applied at 22 fl. oz./A (0.40 lb. a.i./A) plus AMS at 3 lbs./A (17 lbs. per 100 gallons) when corn is in the V-3 to V-4 stage of growth, i.e., 3 to 4 developed collars. A second treatment of 22 fl. oz./A (0.40 lb. a.i./A) plus AMS at 3 lbs./A may be applied when the corn is in the V-6 to V-7 stage of growth or up to 24 inches tall. Sequential applications must be at least 10 days apart. When temperatures exceed 85 °F, the rate of AMS can be reduced to 1.5 lbs./A (8.5 lbs. per 100 gallons) to reduce potential leaf burn.

  Restrictions to the Directions for Use for Glufosinate-resistant Corn for Seed Propagation
  - **DO NOT** apply more than 2 applications per year to glufosinate-resistant corn for seed propagation.
  - Sequential application must be made a minimum of 10 days apart.
  - **DO NOT** apply more than 22 fl. oz./A (0.40 lb. a.i./A) in a single application or more than 44 fl. oz./A (0.80 lb. a.i./A) per year.

- **Glufosinate-resistant Cotton:**
  Total TNV may also be used in cotton seed propagation as a foliar spray to selectively eliminate cotton plants that do not carry a gene that imparts resistance to glufosinate-ammonium and as such, can be applied to remove susceptible segregates during cotton seed propagation. Breeding material not possessing the glufosinate-ammonium resistance gene will be severely injured or killed if treated with this herbicide. See application use directions for use on cotton for use rates and application timing.

- **Glufosinate-resistant Soybeans:**
  For the selection of resistant "segregates", Total TNV may be applied at up to 29 to 43* fl. oz./A (0.53 – 0.79 lb. a.i./A) when soybean is in the third trifoliate stage. A second treatment of 29 to 43* fl. oz./A (0.53 – 0.79 lb. a.i./A) may be applied up to but not including the bloom growth stage of soybean. Sequential applications must be at least 5 days apart.

  Restrictions to the Directions for Use for Glufosinate-resistant Corn for Seed Propagation
  - **DO NOT** apply more than 2 applications per year to glufosinate-resistant soybeans for seed propagation.
  - Sequential application must be made a minimum of 5 days apart.
  - **DO NOT** apply more than 43 fl. oz/A (0.79 lb. a.i./A) in a single application.*In California, the maximum single application rate is 36 fl. oz/A (0.66 lb. a.i./A).
  - **DO NOT** apply more than 87 fl. oz./A (1.59 lbs. a.i./A) per year.*In California, the maximum annual application rate is 72 fl. oz./A/year (1.32 lbs. a.i./A/year).

APPLICATION INSTRUCTIONS FOR LISTED TREE FRUIT, TREE NUTS, VINES, BERRIES, AND OLIVES

Apply Total TNV to the tree, vine, and berry crops listed below. Uniform thorough spray coverage is necessary to achieve consistent weed control.

Registered Crops:

- **Bushberries (Crop Subgroup 13B):**
  blueberry, highbush; blueberry, lowbush; buffalo currant; currant, black; currant, red; elderberry; gooseberry; huckleberry; native currant
- **Other Berries:**
  lingonberry, juneberry, and salal
- **Citrus Fruits** (**Crop Group 10-10):**
  Orange or tangerine/mandarin - Calamondin; citron; citrus hybrids; Mediterranean mandarin; orange, sour; orange, sweet; satsuma mandarin; tachibana orange; tangerine (mandarin); tangelo; tangor; trifoliate orange; cultivars, varieties, and/or hybrids of these.
  Lemon or lime - Australian desert lime; Australian finger lime; Australian round lime; brown river finger lime; kumquat; lemon; lime; mount white lime; New Guinea wild lime; Russell River lime; sweet lime; Tahiti lime; cultivars, varieties, and/or hybrids of these.
  Grapefruit - Grapefruit; Japanese summer grapefruit; pummelo; tangelo; uniq fruit; cultivars, varieties, and/or hybrids of these.
- **Olives (all varieties)**
- **Pome Fruit (Crop Group 11-10):**
  Apple; crabapple; loquat; mayhaw; pear; pear, oriental; quince; azarole; hook; medlar; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties and/or hybrids of these.
- **Stone Fruit (Crop Group 12-12):**
  Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, chickasaw; plum, damson; plum, Japanese; plumcot; prune; and cultivars varieties and/or hybrids of these
- **Tree Nuts (Crop Group 14 including Pistachios):**
  Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut (bush nut); pecan; walnut, black and English
- **Grapes:** all grape varieties (table, wine and raisins)

Application Rate and Timing

For best results, apply to emerged, young, actively growing weeds. Warm temperatures, high humidity, and bright sunlight improve the performance of Total TNV. Weed control may be reduced when applications are made to weeds under stress due to drought or cool temperatures. Weeds under stress or in dense populations will require application

at the highest specified label use rate. Stressed conditions also include prior treatments of other contact or systemic herbicides. **DO NOT** retreat these weeds with Total TNV until sufficient regrowth has occurred.

Apply Total TNV as a directed spray to control undesirable vegetation in tree, vine, and berries listed on this label. Apply as a broadcast, banded, or spot treatment application depending on the situation to control weeds listed under the heading **Weeds Controlled in Tree, Vine and Berry Crops**. Avoid direct spray or drift to desirable vegetation. Regrowth may occur due to the weed stage of growth at application, low use rate, or environmental conditions. Repeat applications of Total TNV may be necessary to control plants generating from underground parts or seed.

Avoid contact of Total TNV solution, spray, drift or mist with green bark, stems, or foliage, as injury may occur to trees, vines, and berries. **Only trunks with callused, mature brown bark may be sprayed unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers. Contact of Total TNV with parts of trees, vines, or berries other than mature brown bark can result in serious damage.**

Application Methods for Broadcast Applications:
Apply Total TNV at the rates listed below for broadcast applications based on weed size and stage of growth.

Weed Size and Stage	Rate of this product
Weeds < 3 in height	48 fl. oz./A (0.88 lb. a.i./A)
Weeds < 6 in height pre-tiller grasses	56 fl. oz/A (1.02 lbs. a.i./A)
Weeds > 6 in height and/or grasses that have tillered	56 - 82 fl. oz./A (1.02 – 1.5 lbs. a.i./A)

Application Methods for Banded Spray Applications:
Banded applications may be used using the following formula to calculate the amount of herbicide needed for orchard or vineyard strip sprays:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Rate per acre broadcast} = \text{Amount of herbicide needed for treatment}$$

Application Methods for Spot or Directed-spray Applications:
For spot or directed spray applications, mix Total TNV at 1.7 fl. oz. (0.031 lbs. a.i.) per gallon of water. Apply to undesirable vegetation foliage until wet but prior to runoff. Ensure uniform and complete coverage. Thoroughly clean the sprayer following use. **DO NOT** make spot or directed spray applications to tree or vine trunk as injury may occur.

Weeds Controlled in Tree, Vine and Berry Crops:

Broadleaf Weeds

Alkali sida	Fleabane, annual	Morningglory, ivyleaf	Smartweed, Pennsylvania
Ammannia, purple	Goosefoot	Morningglory, pitted	Sowthistle, annual
Arrowhead, California	Gromwell, field	Mullein, turkey	Spurge, prostrate
Buckwheat, wild	Groundcherry, cutleaf	Mustard, wild	Starthistle, yellow
Buffalobur	Groundsel, common	Nettle	Sunflower, common
Burclover, California	Henbit	Nightshade, black	Sunflower, prairie
Carpetweed	Jimsonweed	Nightshade, eastern black	Sunflower, volunteer
Chickweed, common	Knotweed	Nightshade, hairy	Swinecress
Chinese thornapple	Kochia	Pennycress	Thistle, Russian
Cocklebur, common	Lambsquarters, common	Pigweed, redroot	Turnip, wild
Copperleaf, Virginia	Lettuce, miner's	Pineapple-weed	Velvetleaf
Cudweed	Lettuce, prickly	Puncturevine	Vervain
Cutleaf evening primrose	London rocket	Purslane, common	Vetch
Dodder	Mallow, common	Radish, wild	Virginia copperleaf
Eclipta	Malva (little mallow)	Ragweed, common	Willowherb, panicle
Fiddleneck	Marestail	Ragweed, giant	
Filaree	Mayweed	Redmaids	
Filaree, redstem	Morningglory, entireleaf	Shepherd's purse	

Grass Weeds

Barnyardgrass	Crabgrass, smooth	Junglerice	Shattercane
Bluegrass, annual	Cupgrass, woolly	Oat, wild	Sprangletop
Brome, ripgut	Foxtail, giant	Panicum, fall	Stinkgrass
Bromegrass, downy	Foxtail, green	Panicum, Texas	Wheat, volunteer

Grass Weeds

Canarygrass	Foxtail, yellow	Rush, toad**	Windgrass
Chess, soft	Goosegrass	Ryegrass, annual*	Witchgrass
Crabgrass, large	Johnsongrass, seedling	Sandbur, field	

Biennial and Perennial Weeds

Aster, white heath	Clover, red	Horsetail	Paragrass	Thistle, musk
Bindweed, field	Clover, white	Lovegrass	Plantain	Torpedograss
Bindweed, hedge	Dallisgrass	Mugwort	Poison ivy/oak	Vaseygrass
Bluegrass, Kentucky	Dandelion	Mullein, common	Quackgrass	Woodsorrel
Bromegrass, smooth	Dock, curly	Mustard, tansy	Rocket, yellow	Yarrow, common
Bulrush**	Dogbane (hemp)	Nutsedge, purple	Rose, wild	
Burdock	Fescue	Nutsedge, yellow	*Rubus* spp.	
Canada thistle	Golden rod, gray	Onion, wild	Spurge, leafy	
Clover, Alsike	Guineagrass	Orchardgrass	Thistle, bull	

* apply to annual ryegrass prior to 3 inches in height
**indicates suppression

Restrictions to the Directions for Use on Tree, Vine, and Berry Crops:

- **DO NOT** graze harvest, and/or feed treated orchard cover crops to livestock.
- **DO NOT** apply Total TNV through any type of irrigation system.
- **DO NOT** apply Total TNV aerially to tree, berry, or vine crops.
- **Pre-harvest Interval (PHI): DO NOT** apply Total TNV within 14 days of nut, fruit, berry, or grape harvest.
- **DO NOT** make spot spray applications to suckers, as tree injury may occur.

Berry Bushes and Stone Fruit

- **DO NOT** apply more than 164 fl. oz./A (3 lbs. a.i./A) of Total TNV per year.
- **DO NOT** make more than 2 applications per year at a maximum single application rate of 82 fl. oz./A (1.5 lbs. ai/A).
- Sequential applications must be made a minimum of 28 days apart.

Tree Nuts, Vines, Pome Fruit, Citrus and Olives

- **DO NOT** apply more than 246 fl. oz./A (4.5 lbs. a.i./A) of Total TNV per year.
- **DO NOT** make more than 3 applications per year at a maximum single application rate of 82 fl. oz./A (1.5 lbs. a.i./A).
- Sequential applications must be made a minimum of 14 days apart.

Sucker Control with Total TNV

Total TNV will reduce or eliminate sucker growth when applied to suckers that are young, green, and uncallused. For sucker control, apply a split application approximately 4 weeks apart at 56 fl. oz./A (1.02 lbs. ai/A). Coverage of all sucker foliage is necessary for optimum control. Suckers must not exceed 12 inches in length.

Tree, Vine, and Berry Tank Mix Partner Instructions:

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Total TNV does not provide residual weed control or control of unexposed plant parts. Certain herbicide tank mixes may aid in the performance of Total TNV or be added to provide residual herbicide activity. The use of additional surfactants or crop oils may increase the risk of crop response. Please refer to the surfactant label for more detailed information. Total TNV may be applied in tank mix combinations with other products provided these other products are labeled for the timing and method of application for the crop to be treated. No label dosage rates may be exceeded. Total TNV cannot be mixed with any product containing a label prohibition against such mixing.

APPLICATION DIRECTIONS FOR POTATO VINE DESICCATION

Application Rates and Timing:
Apply Total TNV at the beginning of natural senescence of potato vines. Apply 21.0 fl. oz./A (0.38 lbs. a.i./A). **DO NOT** split this application or apply more than 1 application per harvest. Potato varieties with heavy or dense vines may require an application of another desiccation product to complete vine desiccation.

Thorough coverage of the potato vines to be desiccated is essential. Use a sufficient volume of water (20 to 100 gallons per acre) to obtain a thorough coverage of the potato vines. Vary the gallons of water per acre and the spray pressure as indicated by the density of the potato vines to assure thorough spray coverage. Increase the spray volume to at least 30 gallons of water per acre when the potato vine canopy is dense or under cool and dry conditions. Apply Total TNV with the spray boom as low as possible to achieve thorough coverage of the potato vines for best control and to minimize drift potential.

Restrictions to the Directions for Use in Potato Vine Desiccation:

- **DO NOT** apply more than 21 fl. oz./A (0.38 lbs. a.i./A) of Total TNV in a single application.
- **DO NOT** make more than 1 application of Total TNV per year.
- **DO NOT** apply more than 21 fl. oz./A (0.38 lbs. ai/A) of Total TNV to potato vines per year.
- **Pre-Harvest Interval (PHI): DO NOT** harvest potatoes until 9 days or more after application of Total TNV.
- **DO NOT** apply to potatoes grown for seed.
- Potatoes, canola, corn, cotton, soybean, and sugar beets may be planted at any time after the application of Total TNV as a potato vine desiccant.
- **DO NOT** plant treated areas to wheat, barley, buckwheat, millet, oats, rye, sorghum, and triticale until 30 or more days after an application of Total TNV as a potato vine desiccant.
- **DO NOT** plant treated areas to root and tuber vegetables, leafy vegetables, and brassica vegetables until 70 days after an application of Total TNV as a potato vine desiccant.
- **DO NOT** plant treated areas to crops other than those listed in this use section until 120 or more days after an application of Total TNV as a potato vine desiccant.
- **DO NOT** split this application or apply more than one application per harvest.

FALLOW FIELDS OR POSTHARVEST

Total TNV may be used as a substitute for tillage to control or suppress weeds in the **Weed Control for Row Crops** section of this label. Applications may be made in fallow fields, postharvest, prior to planting or emergence of any crop listed on this label.

Apply Total TNV at 22 or 29 fl. oz./A (0.40 or 0.53 lb. a.i./A) to fallow fields to control specific weeds. Total TNV must be applied with ammonium sulfate. Tank mix with 2,4-D, glyphosate or atrazine to enhance total weed control.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

See **Application and Mixing Procedures** section of this label for additional information on how to apply Total TNV.

Restrictions to the Directions for Use in Fallow Fields or Postharvest:

- See the **Product Information** section of this label for **Rotational Crop Restrictions**.
- **DO NOT** apply more than 29 fl. oz./A (0.53 lbs. a.i./A) of Total TNV in a single application.
- **DO NOT** make more than 3 applications per year.
- Sequential applications must be made a minimum of 14 days apart.

APPLICATION DIRECTIONS FOR USE ON NONCROPLAND USE SITES

When applied as directed, Total TNV controls undesirable plant vegetation in public, military, and non-crop areas including private, public and military lands in the following areas: airfields, airports, alleys, lanes, paths, trails, access roads, around commercial or industrial structures or outbuildings, around farm and ranch structures and outbuildings, around ornamental gardens, around ornamental trees and shrubs (including Christmas trees), site preparation areas

for conifer and hardwood, bare ground, barrier strips, beaches*, campgrounds, construction sites, ditch banks, drive-in theaters, driveways and ramps, dry ditches and canals, fences and fencerows, firebreaks, golf courses* [(excluding greens, tees, aprons, fairways and roughs)]*, gravel yards, Conservation Reserve Program (CRP)*, habitat restoration and management areas, highways and roadsides (including aprons, medians, guardrails and right of ways), industrial plant sites, industrial areas, lumber yards, nurseries and shade houses and greenhouses, landscapes and mulched areas, natural areas, parking areas, parks, paved areas, petroleum and other tank farms, pumping installations, pipeline, power, telephone and utility rights-of-way, sewage disposal areas, fuel storage areas, power stations, preplant to turf and ornamental plants, railroad rights-of way, recreation areas, refineries, resorts, schools, sidewalks, sports areas, storage areas, substations, tennis courts, shelter belts, uncropped farmstead areas, vacant lots, walkways, wastelands, wildlife openings, wildlife habitat areas, wildlife food plots*.

*Not for use in California

Industrial: This product may be used to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way, and wayside structures. This product may be tank mixed with other herbicides for these use sites unless specifically prohibited by the product label.

Conservation Reserve Program (CRP)*: This product can be used to control undesirable vegetation when rotating out of CRP acres or to suppress competitive growth and seed production of undesirable vegetation in CRP acres. For selective applications with broadcast spray equipment, apply 48 to 56 fl. oz./A (0.88 to 1.0 lb. a.i./A) of this product in early spring before desirable CRP grasses, including crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy. Some stunting of CRP perennial grasses will occur if applications are made when plants are not dormant.

*Not for use in California

Wildlife Food Plots*: This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling.

*Not for use in California

Site Preparation for Conifer and Hardwood Production Areas: This product may be used as a site preparation treatment prior to planting conifer and hardwood species. **DO NOT** apply Total TNV as an over-the-top broadcast spray to desirable conifer or hardwood plantings. Seedling conifer and hardwood trees may be planted into the treated area after the restricted entry interval (REI) of 12 hours has elapsed.

Greenhouse: This product may be used to control weeds listed on this label which are growing in greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

Dormant Bermudagrass and/or Bahiagrass*: When applied to dormant Bermudagrass and/or Bahiagrass*, this product will provide control or suppression of many winter annual weeds. Treat with 56 to 82 fl. oz./A (1.0-1.5 lb. a.i./A) only when turfgrass is fully dormant in late fall or winter and prior to spring green-up. Spot treatments or broadcast applications of this product to non-dormant turfgrass may result in injury or delayed green-up. Avoid high volume and spot applications where spray volume exceeds 80 gallons per acre or injury or delayed greening may occur. Applications to residential lawns are limited to spot treatments only. The maximum application rate must not exceed 4 fl. oz./gal. of water/1000 sq. ft. (corresponding to a rate of 0.0312 lb. a.i./100 sq. ft.). Applications for renovating Bermudagrass lawns must be conducted when the weather is cool and Bermudagrass is dormant.

*Not for use in California

Side Trimming: To control only a portion of the plant, direct the spray solution to thoroughly cover (spray to wet) only the portion of the plant to be controlled.

Site Preparation for Conifer and Hardwood Production Areas: When applied in site preparation prior to planting conifer and hardwood species, this product will provide control of undesirable vegetation. Seedling conifer and hardwood trees may be planted into the treated area after the restricted entry interval (REI) of 12 hours has elapses.

Brush Control*: This product will provide control or suppression of the perennial woody species (brush) listed below. Use this product at rates from 1 to 3 quarts (0.58 - 1.75 lbs. a.i.) of this product per acre to impact the growth of woody plants and not to exceed 1.9 gallons per acre per year (4.5 lb. a.i./A/year). Non-ionic surfactants (NIS) or methylated seed oils (MSO) may be used when making foliar applications. Follow any instructions on the surfactant manufacturer's label.

For hard-to-control woody plants including elm, certain oaks or when plant leaf surfaces have hardened off, use the higher rate of this product or tank mix this product with other herbicides registered for control of these woody plants. Higher specified rates per acre of this product must be used when conditions are not optimum for spray coverage,

including when weed growth is heavy or dense. Lower specified rates must be used when the target species is conifer and when vegetation growth conditions allow for uniform spray coverage.

* Not for use in California

NONCROP USE RESTRICTIONS:

- **DO NOT** apply more than 246 fl. oz./A (4.5 lb. a.i./A) of Total TNV per year.
- **DO NOT** apply more than 82 fl. oz./A (1.5 lb. a.i./A) of Total TNV in a single application, except for brush control applications. For brush control **DO NOT** apply more than 96. fl. oz./A (1.75 lbs. a.i./A) in a single application.
- **DO NOT** apply more than 3 broadcast applications (excluding spot treatments) per year, except for brush control. For brush control **DO NOT** apply more than 2 applications when apply at a single application rate of 83 - 96 fl. oz/A (1.52 - 1.75 lbs. a.i./A).
- **DO NOT** apply this product through any type of irrigation system.
- Sequential applications must be made a minimum of 5 days apart.
- **DO NOT** apply this product within any enclosed structure in residential or commercial landscapes.
- **DO NOT** apply this product over-the-top as a broadcast application to ornamentals, conifers or hardwood plantings.
- **DO NOT** apply this product over-the-top of ornamental plants, and **DO NOT** allow spray of this product to contact or drift onto the foliage, green stems, exposed roots or fruit of desirable plants. Avoid application of this product under conditions that favor drift of sprays onto desired ornamentals or residential lawns.

APPLICATION RATES

Mix 0.5 to 2.0 fl. oz. (0.009 to 0.036 lb. ai) of this product per gallon of spray solution (24 to 82 fl. oz./A (0.44 to 1.5 lb. ai/A) and apply 1 gallon of spray solution to 1,000 square feet to actively growing weeds. Adjust application rate as needed when using spray volumes delivering greater or less than 1 gallon per 1,000 square feet. Determine proper use rate based on weed size in Table 1. Larger weeds will require a higher use rate and see Table 1 for details.

USE RATE FOR THIS HERBICIDE

Apply this product at the rates listed below for broadcast applications based on weed size and stage of growth.

Weed Size and Stage	Rate of this product (Per Gallon of Water)	Rate of this product (Per 1,000 sq. ft.)	Rate of this product (Per Acre)	Spot Spray % Solution
Easily Controlled Weeds < 3 in height*	0.5 fl. oz. (0.009 lb. a.i.)	0.5 fl. oz. (0.009 lb. a.i.)	24 fl. oz./A (0.44 lb. a.i.)	0.5
Weeds < 3 in height	1.0 fl. oz. (0.018 lb. a.i.)	1.0 fl. oz. (0.018 lb. a.i.)	48 fl. oz./A (0.88 lb. a.i.)	0.5-0.75
Weeds < 6 in height pre-tiller grasses	1.25 fl. oz. (0.023 lb. a.i.)	1.25 fl. oz. (0.023 lb. a.i.)	56 fl. oz./A (1.0 lb. a.i.)	0.75-1.25
Weeds > 6 in height and/or grasses that have tillered	1.25 to 2.0 fl. oz. (0.023 to 0.036 lb. a.i.)	1.25 to 2.0 fl. oz. (0.023 to 0.036 lb. a.i.)	56-82 fl. oz./A (1.0 to 1.5 lb. a.i.)	1.25-1.5

*See Weeds Controlled Table below for details.

For spot or directed spray applications by backpack sprayers, mix this product at 0.5 to 2.0 fl. oz. of product (0.009 to 0.036 lb. ai) per gallon of water. Larger and more difficult to control weeds require a higher use rate. When using the per gallon rate, calibrate sprayers to deliver 1 gallon of spray solution per 1,000 square feet. Adjust application rate as needed when using spray volumes delivering greater or less than 1 gallon per 1,000 square feet. Thorough spray coverage of weeds is necessary to maximize weed control. Spray coverage needs to be uniform, but **DO NOT** spray to the point of runoff. Thoroughly clean the sprayer following use. **DO NOT** make spot or directed spray applications to desired plant foliage or stems as injury may occur.

This product offers postemergence control of susceptible grasses, sedges and broadleaf weeds (See WEEDS CONTROLLED Table), as well as additional mode of action to assist in the control of resistant weeds.

IMPORTANT: Contact with spray or spray drift of this product may cause severe injury or destruction of certain desirable plants, especially herbaceous species including bedding plants or direct seeded annual and perennial flowers. The use of spray shields that limit the plant exposure to this product is highly advised when applying this product near desirable plants.

HOW TO APPLY

Spot or Directed Applications

This product may be used as a spot- or directed-spray application. Prepare the desired volume of spray solution by mixing this product in water with the amounts indicated in the following table:

Amount of this product added to water to make 1, 25, or 100 gallons of spray solution at dosages of ½ to 3%. See Table 1 for % solution to use based on target vegetation.

% SOLUTION	VOLUME OF SPRAY SOLUTION		
	1 GALLON	25 GALLONS	100 GALLONS
	THIS PRODUCT		
0.5 %	0.75 fl. oz.	1 pint	1/2 gallon
1%	1.5 fl. oz.	1 quart	1 gallon
2%	3 fl. oz.	2 quarts	2 gallons
3%	4.5 fl. oz.	3 quarts	3 gallons

Select appropriate solution concentration and spray undesirable vegetation foliage on a spray-to-wet basis. **DO NOT** apply beyond runoff. Ensure uniform and complete coverage. Use a coarse spray. To minimize drift, avoid spraying during windy conditions. Backpack, pump-up, and hydraulic sprayers may be used. Thoroughly clean the sprayer following use.

Use of Spray Adjuvants: The addition of a nonionic antifoaming agent may reduce foaming, especially when using soft water. The use of Methylated seed oil (MSO) at 1% v/v (1 gal. per 100 gal. of spray solution) or non-ionic surfactant (NIS) at a minimum rate of 0.25% v/v (1 qt. per 100 gal. of spray solution) may be used for foliar applications. The addition of 8.5 to 17.0 lbs. of ammonium sulfate (spray grade) per 100 gal. of water (1 to 2% by weight) or 2 to 4 lbs. of ammonium sulfate per acre may result in better weed control.

This herbicide can be tank mixed with other non-selective herbicides including glyphosate and preemergence residual herbicides including flumioxazin. Follow the most restrictive label restrictions and precautions for each product. A combination with a residual herbicide including flumioxazin provides effective control of existing weeds as well as lasting residual weed control in areas including landscape beds and xeriscapes.

Aerial Applications (Helicopter Application Only): Use a drift control device including a “Microfoil,” or “Thru Valve-Boom” or equivalent drift control system when applying as a foliar treatment to utility rights-of-way, tree production areas, ditch banks or other approved sites that may be near susceptible crops. The application volume required will vary with the height and density of the vegetation and the application equipment used. Generally, aerial applications will require a minimum of 15 gallons per acre to ensure thorough coverage. Drift control additives may be used. If a drift control additive is used, observe and follow all directions and precautions as specified on the additive label.

Foliar Treatments with Ground Equipment

- **High Volume Applications**: Use high volume applications for optimum performance when spraying medium to high density vegetation. Use equipment calibrated to deliver 50 to 100 gallons of finished spray per acre. For best results, make sure that the targeted plant foliage is thoroughly covered.
- **Low Volume Applications**: Use low volume applications when brush height is less than 6 feet and brush cover is less than 60% of the area. Use equipment calibrated to deliver 10 to 50 gallons of finished spray per acre.

Broadcast Applications with Ground Equipment: Use equipment calibrated to deliver 20 to 100 gallons of finished spray per acre. The amount of spray solution to use will depend on the height and density of the brush. Use spray nozzles and equipment that will provide thorough coverage of the targeted brush species.

BRUSH* SUPPRESSED OR CONTROLLED	
Blackberry	Poison ivy/oak
Deer brush	Pine
Douglas fir	Roundleaf
Gallberry	Greenbrier
Hazel	Salmonberry
Honeysuckle	Sweetgum
Huckleberry	Sumac
Maple	Thimbleberry
Multiflora rose	Trumpetcreeper
Oak	Vine Maple
	Western Red Cedar
*Not for use in California	

WEEDS CONTROLLED		
Alfalfa+	Gallinsoga, small flower+	Pokeweed+
Alkali sida	Geranium, cutleaf+	Puncturevine
Amaranth, Palmer+	Goosefoot	Purslane, common*^
Ammannia, purple	Goosegrass*^	Pusley, Florida+
Anoda, spurred*^	Goldenrod, gray	Quackgrass
Arrowhead, California	Gromwell, field	Radish, wild
Artichoke, Jerusalem+	Groundcherry, cutleaf	Ragweed, common
Aster, white heath	Groundsel, common	Ragweed, giant
Bahiagrass	Guineagrass	Redmaids
Barley, volunteer*^	Hempnettle+	Rocket, yellow
Barnyardgrass*	Henbit	Rose, wild
Beggarweed, Florida+	Horsenettle, Carolina*^	Rubus spp.
Bermudagrass+	Horsetail	Rice, red+
Bindweed, field	Johnsongrass, rhizome+	Rice, volunteer+
Bindweed, hedge	Johnsongrass, seedling*^	Rush, toad***
Black medic+	Jimsonweed	Ryegrass, annual**
Bluegrass, annual	Junglerice*^	Sandbur, field
Bluegrass, Kentucky	Knotweed*^	Senna coffee+
Blueweed, Texas+	Kochia	Shattercane
Brome, ripgut	Ladysthumb+	Shepherd’s Purse
Bromegrass, downy	Lambsquarters, common	Sicklepod (java bean)+
Bromegrass, smooth	Lettuce, miners	Sida, prickly+
Buckwheat, wild	Lettuce, prickly	Signalgrass, broadleaf*^
Buffalobur	London rocket	Smartweed, Pennsylvania
Bulrush***	Lovegrass	Smellmelon+
Burclover, California	Mallow, common	Sowthistle, annual
Burcucumber+	Mallow, Venice+	Sowthistle, perennial+
Burdock	Malva (little mallow)	Soybean, volunteer+
Bursage, woolyleaf+	Marestail	Sprangletop
Canarygrass	Marshelder, annual+	Spurge, prostrate*^
Carpetgrass	Mayweed	Spurge, leafy
Carpetweed	Milkweed, common***+	Spurge, spotted*^
Catchweed bedstraw (cleavers)*^	Milkweed, honeyvine***+	Starbur, bristly+
Chess, soft	Millet, wild proso+	Starthistle, yellow
Chickweed, common	Millet, proso volunteer+	Stinkgrass
Chickweed, mouse-ear+	Morningglory, entireleaf	Sunflower, common
Chinese thornapple	Morningglory, ivyleaf	Sunflower, prairie*^
Clover, Alsike	Morningglory, pitted	Sunflower, volunteer
Clover, red	Morningglory, sharppod*^	Swinecress
Clover, white	Morningglory, smallflower+	Thistle, bull
Cocklebur, common	Morningglory, tall+	Thistle, Canada
Copperleaf, hophornbeam+	Mugwort	Thistle, musk
Copperleaf, Virginia	Muhly, wirestem***+	Thistle, Russian
Corn, volunteer+	Mullein, common	Timothy+
Cotton, volunteer+	Mullein, turkey	Torpedograss
Crabgrass, large*^	Mustard, tansy	Turnip, wild
Crabgrass, smooth*^	Mustard, wild	Vaseygrass
Croton, tropic*^	Nettle	Velvetleaf*^
Croton, woolly*^	Nightshade, black	Vervain
Cudweed	Nightshade, eastern black	Vetch
Cupgrass, woolly	Nightshade, hairy	Waterhemp, common+
Cutleaf evening primrose	Nightshade, silverleaf+	Waterhemp, tall+
Dallisgrass	Nutsedge, purple	Wheat, volunteer
Dandelion	Nutsedge, yellow	Willowherb, panicle
Devil’s claw*^	Oat, wild*^	Windgrass
Dock, curly	Onion, wild	Witchgrass
Dock, smooth+	Orchardgrass	Woodsorrel
Dodder	Panicum, fall*^	Wormwood, biennial+

Dogbane (hemp) Eclipta Fescue Fleabane, annual Fiddleneck Filaree Filaree, redstem Foxtail, bristly+ Foxtail, giant Foxtail, green Foxtail, robust purple+ Foxtail, yellow*^ Gallinsoga, hairy+	Panicum, Texas Paragrass Pennycress Pigweed, redroot*^ Pigweed, prostrate*^ Pigweed, spiny*^ Pigweed, smooth*^ Pigweed, tumble*^ Pineapple weed Plantain Poinsettia, wild+ Poison ivy/oak	Yarrow, common
+Not for use in California ^Use rate in California 24 fl. oz./A (0.44 lb. ai) *easily controlled species **apply to annual ryegrass prior to 3 inches in height ***indicates suppression only		

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

DO NOT use or store near heat or open flame. Keep the container tightly closed and dry in a cool, well-ventilated place. Storage temperature must not exceed 125°F. If storage temperature for bulk Total TNV is below 32°F, the material must not be pumped until its temperature exceeds 32° F. Protect against direct sunlight.

Pesticide Disposal

Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Handling: Follow the handling instructions appropriate for container size and type.

Nonrefillable container equal to or less than 5 gallons. 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 ¼ 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 or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Nonrefillable container greater than 5 gallons. 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. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Seed Disposal: To dispose of out-of-date or otherwise unmarketable seed from plants, which have been treated with Total TNV, broadcast and lightly incorporate seed into field soils using disc or other suitable implement. Any resulting crop may be destroyed by chemical or mechanical means. Alternatively, seed may be destroyed by deep burial, incineration or landfill disposal.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED “AS IS” BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THE NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. BUYER’S OR USER’S EXCLUSIVE REMEDY, AND MANUFACTURER’S OR SELLER’S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, **DO NOT** use the product, and return it unopened to the Seller, and the purchase price will be refunded.

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