

DEC 19 2000

Marman USA, Inc.
 c/o Kim Davis
 RegWest Company
 30856 Rocky Road
 Greeley, CO 80631-9375

Dear Ms. Davis:

SUBJECT: Amendment Updating Label to Agree with Latest Accepted Label of Parent
 Product (62719-5)
 Toram® 101
 EPA Reg. No.: 48273-15
 Your Submission Dated November 3, 2000

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable, provided you make the following changes:

1. Add the following statements after the general misuse statement ("It is a violation of Federal law ...") at the beginning of the Directions for Use:

"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."

2. On page 4, in the Non-Agricultural Use Requirements box, revise the "Entry Restrictions for Non-WPS Uses" to read as follows:

"For applications on non-crop areas and wildlife openings, do not allow worker entry into treated areas until sprays have dried, unless applicator and other handler PPE is worn."
 [The word "treated" is missing from the draft labels.]

3. Correct the typographical error in the Spanish language warning on the front panel: Separate the words "en" and "detalle".

RD:STANTON:PM Team 23:Rm. 239:CM-2:305-5218:Disk #13:S588215.LET

CONCURRENCES							
SYMBOL ▶	7505C						
SURNAME ▶	S. Stanton						
DATE ▶	Dec 19, 2000						

This labeling supersedes previously accepted labeling for the subject product. A stamped copy of the label is enclosed for your records. Submit one copy of your final printed labeling incorporating the above changes before you release the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

Restricted Use Pesticide
May injure (phytotoxic) susceptible, non-target plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

TORAM[®] 101

Specialty Herbicide

A weed and brush herbicide for control of unwanted annual and perennial broadleaf weeds and woody plants and vines on forest planting sites and non-crop areas including industrial, manufacturing and storage sites; rights-of-way, such as electrical power lines, communication lines, pipelines, highways, railroads; and wildlife openings in forest and non-crop areas.

ACTIVE INGREDIENTS:

picloram: 4-amino-3,5,6-trichloropicolinic acid, triisopropanolamine salt	10.2%
2,4-dichlorophenoxyacetic acid, triisopropanolamine salt ...	39.6%
INERT INGREDIENTS	50.2%
Total	100.0%

Acid equivalents:

picloram: 4-amino-3,5,6-trichloropicolinic acid – 5.7% – 0.54 lb./gal.
2,4-dichlorophenoxyacetic acid – 21.2% – 2 lbs./gal.

Keep Out of Reach of Children
DANGER PELIGRO
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted endetalle. (If you do not understand the label, find someone to explain it to you in detail).

See back panel for additional precautionary statements.

Net Contents: _____

ACCEPTED
with COMMENTS
In EPA Letter Dated

DEC 19 2000

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

48273-15

EPA Reg. No. 48273-15

EPA Est. 48273-FL-1

Marman USA, Inc.
P.O. Box 22829
Tampa, FL 33622-2829

PRECAUTIONARY STATEMENTS
Hazards to Humans & Domestic Animals

DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed or inhaled. Do not get in eyes, on skin or on clothing. Avoid breathing spray mist.

Personal Protective Equipment (PPE)

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

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Polyvinyl Chloride (PVC) or Viton
- Shoes plus socks
- Protective eyewear
- For containers of over 1 gallon but less than 5 gallons: Mixers and loaders who do not use a mechanical system (such as probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to other required PPE.

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, use detergent and hot water. Keep and was PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

Engineering Controls Statements

For containers of 5 gallons or more: A mechanical system (such as probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

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

First Aid

If in Eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If Swallowed	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If Inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on Skin or Clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Immediately rinse skin with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.	
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

Environmental Hazards

This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Picloram is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. This chemical can contaminate surface water through spray drift. Under some conditions, picloram may also have a high potential for runoff into surface water (primarily via dissolution in runoff water). These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or

ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips and areas over-laying tile drainage systems that drain to surface water.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing and transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame. Do not cut or weld container.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read *Warranty Disclaimer and Limitation of Remedies* elsewhere on this label.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

DIRECTIONS FOR USE

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

Carefully read all Directions for Use before applying.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Storage: Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and thoroughly mixed before using.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law and may contaminate groundwater. If these cannot be used according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

Metal Container Disposal: Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **Plastic Container Disposal:** Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Consult federal, state or local authorities for approved alternative procedures.

Sprayer Clean-Out: To avoid injury to desirable plants, equipment used to apply Toram® 101 should be thoroughly cleaned before reusing to apply any other chemicals.

1. Thoroughly rinse and flush application equipment after use. Dispose of rinse water in non-cropland area away from water supplies.
2. Rinse a second time, adding 1 qt. of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Remove and separately clean nozzles and screens.

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 the training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Neoprene Rubber, Natural Rubber, Polyvinyl Chloride (PVC) or Viton
- Shoes plus socks
- Protective eyewear

Non-Agricultural Use Requirements

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

Entry Restrictions for Non-WPS Uses: For applications on non-crop areas and wildlife openings, do not allow worker entry into areas until sprays have dried, unless applicator and other handler PPE is worn.

General Information

Toram[®] 101 weed and brush herbicide is recommended for control of unwanted annual and perennial broadleaf weeds and woody plants and vines on forest planting sites and non-crop areas including industrial manufacturing and storage sites, rights-of-way, such as electrical power lines, communication lines, pipelines, highways, railroads and wildlife openings in forest and non-crop areas.

Use Toram[®] 101 weed and brush herbicide at rates of ½ to 2 gallons per acre to control broadleaf weeds and at rates of 1 to 2 gallons per acre to control woody plants and vines. Toram[®] 101 may be tank mixed with Garlon[®] 4 or Garlon[®] 3A herbicides, or 4 lbs./gal. 2,4-D low-volatile esters registered for sites listed on this label to control mixed woody plant and vine species. When tank mixing, observe all precautions, directions and limitations on both products' labeling. In all cases use the amounts specified in enough water to give thorough and uniform coverage of the plants to be controlled.

Note: Toram[®] 101 does not readily mix with oil. Use of a non-ionic agricultural surfactant, such as Ortho[®] X-77, Triton[®] AG-98 or Trionic[®], is recommended for all applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre.

General Use Precautions and Restrictions

Use this product only as specified on this label. Observe any special use and application restrictions and limitations, including method of application and permissible areas of use as promulgated by state authorities.

Maximum Use Rates: Total use of Toram[®] 101 must not exceed 8 quarts per acre per annual growing season on rights-of-way and other non-crop areas. No more than 8 quarts per acre may be applied within a period of 2 annual growing seasons on forest sites.

Chemigation: Do not apply this product through any type of irrigation system.

Be sure that use of this product conforms to all applicable regulations.

Do not make application when circumstances favor movement from treatment site.

Do not rotate food or feed crops on treated land if they are not registered for use with picloram until an adequately sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

Do not move treated soil to other areas or use it to grow plants if they are not registered for use with picloram until an adequate sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

Do not spray if the loss of legumes cannot be tolerated. Toram[®] 101 may injure or kill legumes. New legume seedlings may not grow within 2 years following application of this herbicide.

Do not transfer livestock from treated grazing areas onto sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated grass pasture. Otherwise, urine may contain enough picloram to cause injury to sensitive broadleaf plants.

Do not use manure from animals grazing treated areas on land used for growing broadleaf crops, ornamentals, orchards or other susceptible, desirable plants. Manure may contain enough picloram to cause injury to susceptible plants.

Do not use plant material from treated areas for composting or mulching of susceptible broadleaf plants.

Do not contaminate water intended for irrigation or domestic purposes. To avoid injury to crops or other desirable plants, do not treat or allow spray drift or run-off to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes. Do not apply to snow or frozen ground.

Do not apply or otherwise permit Toram[®] 101 or sprays containing Toram[®] 101 to contact crops or other desirable broadleaf plants including, but not limited to, alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes and other vegetable crops, flowers, fruit plants, ornamentals or shade trees.

Do not apply Toram[®] 101 on residential or commercial lawns or near ornamental trees and shrubs. Untreated trees can occasionally be affected by root uptake of herbicide through movement into the topsoil or by excretion of the product from the roots of nearby treated trees. Do not apply Toram[®] 101 within the root zone of desirable trees unless such injury can be tolerated.

Avoid injury to newly planted conifers. Conifer planting intervals vary. Pines planted sooner than 6 months after treatment with Toram[®] 101 may be injured in the south or west of the Cascade Mountains. Other conifers, west of the Cascade Mountains, may be

injured if planted sooner than 8 to 9 months after treatment. For all conifers, the waiting period between treatment and planting should be 11 to 12 months in the area between the Cascade and Rocky Mountains and 8 to 9 months in the lake states and Northeastern U.S.

Avoid injurious spray drift. Applications should be made only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible, may seriously injure susceptible crops or ornamental plants near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

Aerial Application: Avoid spray drift at the application site. The interaction of many equipment- and weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

1. The distance of the outer most operating nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory below.

For aerial application on rights-of-way or other areas near susceptible crops, use Nalco-Trol[®] drift control additive as recommended by the manufacturer or apply the Microfoil[®] or Thru-Valve[®] boom or use an equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems, or other drift control additives or systems, may be utilized if drift control is comparable to that obtained with Nalco-Trol[®] or the Microfoil[®] or Thru-Valve[®] boom. If a spray-thickening agent is used, follow all use recommendations and precautions on the product label. Do not use a thickening agent with the Microfoil[®] boom, or other systems that cannot accommodate thick sprays.

With aircraft, drift can be lessened by applying a coarse spray; by using spray pressures no greater than are required to obtain adequate plant coverage; by using straight stream nozzles directed straight back; by spraying only when wind velocities are low; or by using an approved drift control system.

Ground Equipment: To aid in reducing spray drift, Toram[®] 101 should be used in thickened (high viscosity) spray mixtures using Nalco-Trol[®] drift control additive or equivalent as directed by the manufacturer. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using spray pressures no greater than are required to obtain adequate plant coverage; and by spraying when wind velocity is low. Do not apply with hollow cone-type insecticide or other nozzles that produce a fine droplet spray.

High Volume Leaf-Stem Treatment: Spray drift may be minimized by using spray pressures no greater than are required to obtain adequate plant coverage and spraying no higher than brush tops. Avoid excessive pressures which result in formation of fine spray mists. Nalco-Trol[®] thickening agent or equivalent may be used to reduce spray drift. Do not apply this product through a mist blower.

Aerial Drift Reduction Advisory

Information on 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. 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*).

Controlling Droplet Size:

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure:** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation:** Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low-level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 the 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.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Plants Controlled by Toram® 101

Annual and perennial broadleaf weeds:

- Bindweed, field
- Bouncingbet
- Carrot, wild
- Chicory
- Clover
- Dandelion
- Dock
- Fleabane

- Goldenrod
- Horsenettle
- Knapweed
- Milkweed
- Plantain
- Prickly lettuce
- Ragweed
- Ragwort, tansy

- Rush skeleton weed
- Sowthistle
- Spurge, leafy
- Starthistle, yellow
- Thistles
- Toadflax
- Vetch

Woody plants and vines:

- Ailanthus
- Alder
- Aspen
- Birch
- Blackberry
- Bracken fern
- Buttonbush
- Cherry
- Douglas fir
- Elm

- Fir, balsam
- Gorse
- Gum
- Hemlock
- Hickory
- Honeysuckle
- Kudzu
- Locust
- Maple
- Oak

- Persimmon
- Pine
- Poison oak
- Sassafras
- Sourwood
- Spruce
- Sumac
- Tulip poplar
- Wild rose
- Willow

Specific Application Directions

High Volume Leaf-Stem Treatment

Use Toram® 101 at the rate of 1 gallon in water to make 100 gallons of spray to control broadleaf weeds, vines and other woody plants. To control a wider range of plant species, mix ¼ to ½ gallon of Toram® 101 with 1 to 3 quarts of Garlon® 4 herbicide or 1 to 4 quarts of Garlon® 3A Herbicide or 4 lbs./gal. 2,4-D low-volatile ester and dilute to make 100 gallons of spray. Apply after the foliage is well developed and in a manner to give thorough spray coverage. For woody plants, apply the spray mixture in a manner which thoroughly wets all leaves, stems and root collars. For hard-to-kill species, such as ash and oak, also wet the soil around the root collar. The amount of spray mixture applied per acre will vary with plant size and density; however, total use of Toram® 101 must not exceed 8 quarts per acre. **Note:** Do not allow the spray, even as minute amounts of spray drift, to contact desirable broadleaf plants, and do not wet the soil over roots of such plants.

Broadcast Ground or Aerial Foliage Treatment

To obtain adequate plant coverage, it is recommended that ground applications of Toram® 101 be made in 15 or more gallons of total spray mixture per acre. For aerial applications, use of 5 to 20 gallons per acre of spray mixture is recommended. Use higher spray volumes where plants are tall, where the vegetation to be treated is dense or where difficult to control species are present.

Broadleaf Annual and Perennial Weed and Woody Vine Control: Use Toram® 101 weed and brush herbicide at rates of 2 quarts to 2 gallons per acre in a water spray mixture. Apply to problem weeds and vines any time after growth begins in the spring and late in summer or fall.

For season control of vigorously growing stands of field bindweed, Canada thistle or mixtures of these with susceptible annual weeds such as ragweed, dandelion, plantain, clovers and dock use 2 to 3 quarts of Toram® 101 per acre in water spray.

In arid areas and for control of more resistant perennial weeds use 1 to 2 gallons of Toram® 101 per acre. Use 1 to 1½ gallons per acre to control species such as Canada thistle, field bindweed and milkweed. The higher rates should be used under drought stress conditions and for the more resistant species such as bouncingbet, leafy spurge, toadflax and woody vines. The spectrum of activity can be improved by tank mixing ½ to 1 gallon of Toram® 101 with 1/3 to 1 gallon of Garlon® 3A or 1 to 3 quarts of Garlon® 4 per acre.

Woody Plant Control: Use Toram® 101 at the rate of 1 to 2 gallons per acre in a water spray mixture.

For susceptible seedling stages of species such as aspen, cherry and sumac use 1 to 1½ gallons of Toram® 101 per acre in a water spray mixture.

For more mature and/or less susceptible species such as Poison oak, blackberries, Douglas fir, willow, buttonbush, black locust, sassafras, sumac, tulip poplar and cherry use 2 gallons of Toram® 101 per acre in a water spray mixture.

For more resistant brush such as maple, pine, sourwood, blackgum, cedar and oak, and to improve the spectrum of species controlled, 1 to 2 gallons of Toram[®] 101 per acre can be tank mixed with ½ to 2 gallons per acre of Garlon[®] 3A, Garlon[®] 4 or 4 lbs./gal. 2,4-D low-volatile ester.

Note: For best results under conditions of drought stress, use the higher recommended rates. Even these rates under such conditions may not be as effective as the lower rates under good growing conditions.

Broadcast Treatments for Forest Site Preparation (Not for Conifer Release)

For broadcast applications apply the recommended rate of Toram[®] 101 in a total spray volume of 5 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. Use application systems designed to prevent spray drift to off-target sites. Nozzles or additives that produce larger droplets may require higher spray volumes to provide adequate coverage. **Note:** This use is not intended for conifer release (see *Precautions*).

Southern states including Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Tennessee, Texas and Virginia: To control susceptible woody plants and broadleaf weeds, apply Toram[®] 101 at a rate of 6 to 8 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 6 to 8 quarts per acre of Toram[®] 101 in tank mix combination with 2 to 4 quarts per acre of Garlon[®] 4 herbicide. Where grass control is also desired, Toram[®] 101, alone or in combination with Garlon[®] 4, may be tank mixed with 1 to 4 quarts per acre of Accord[®] or Roundup[®] herbicide, or 8 to 16 fluid ounces per acre of Arsenal[®] Applicator's Concentrate herbicide. Susceptible woody plants, broadleaf weeds and grasses may also be controlled using a tank mix of 6 to 8 quarts per acre to Toram[®] 101 and 3 to 5 quarts of Accord[®] or Roundup[®] herbicide, or 16 to 24 fluid ounces of Arsenal[®] Applicator's Concentrate. **When applying tank mixes, follow use directions and precautions on each product label.**

In Western, Northeastern, North Central and Lake States (states not listed above as Southern states): To control susceptible woody plants and broadleaf weeds, apply Toram[®] 101 at a rate of 4 to 8 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 4 to 8 quarts per acre of Toram[®] 101 in tank mix combination with 1½ to 3 quarts of Garlon[®] 4. Where grass control is also desired, Toram[®] 101 alone or in tank mix combination with Garlon[®] 4, may be applied with 1 to 3 quarts per acre of Accord[®] or Roundup[®], 2 to 4 fluid ounces of Oust[®], or a combination of Accord[®] (or Roundup[®]) plus Oust[®] at the rates listed, or 8 to 16 fluid ounces of Arsenal[®] Applicator's Concentrate. **When applying tank mixes, follow the use directions and precautions on each product label.**

Conifer Strip Thinning in the Northeastern United States

To thin stands of naturally regenerated spruce and fir by applying herbicide in treated bands or strips which alternate with untreated bands or strips, apply Toram[®] 101 such that the application rate in the treated bands or strips is 2 gallons of herbicide per acre in a total spray mixture volume of 12 to 20 gallons. For best results, apply during the period of active conifer growth. To obtain the precise placement of spray mixture in the treated bands that is required for this technique, aerial applications should be made using a helicopter equipped with a Microfoil[®] or Thru-Valve[®] boom. Multiple treated bands may be obtained within a single spray swath by establishing alternating series of flowing and blocked spray nozzles. **Note:** Injury or death of desired residual conifers may result if spray mixture is permitted to contact their foliage as a result of inaccurate flight guidance during aerial application or as a result of spray drift from treated into untreated strips.

Cut Surface Treatments

In forest and other non-crop areas to kill unwanted trees such as elm, maple, oak and pine apply Toram[®] 101, either undiluted or diluted in a 1:1 ratio with water, as directed below.

With Tree Injector Method: Application should be made by injecting ½ milliliter of undiluted Toram[®] 101 or 1 milliliter of the diluted solution through the bark at intervals of 3 inches between edges of the injector wound. The injections should completely surround the tree at any convenient height.

Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

With Frill or Girdle Method: Make a single girdle through the bark completely around the tree at a convenient height. Wet the cut surface with the diluted solution.

Stump Treatment: Spray or paint to wet the cut surfaces of freshly cut stumps or stubs with Toram[®] 101 undiluted or diluted 1:1 in water. All of the cambium area next to the bark is the most vital area to wet.

The above methods may be used successfully in any season except during period of heavy sap flow or certain species, such as maples, or during droughty periods. Untreated trees within a few feet of the treated trees or stumps may be injured or killed.

Broadcast Cut Stubble Treatment

To prevent resprouting of susceptible woody species, after mowing or hand-cutting on non-crop areas and rights-of-way, use Toram[®] 101 at the rate of 2 gallons per acre in 25 or more gallons of a water spray mixture. Best results may be obtained when applications are made before or during periods of active root growth. Do not apply when the soil surface is frozen or covered by snow or standing water. It is recommended that applications be made soon after cutting, before sprouting of woody species has occurred.

Warranty Disclaimer

Marman USA, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **Marman USA, Inc. makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty.**

Inherent Risks of Use

It is impossible to eliminate all risks associated with the use of this product. Plant injury, lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Marman USA, Inc. or the seller. All such risks shall be assumed by the buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability or other legal theories), shall be limited to, at Marman USA, Inc.'s election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

Marman USA, Inc. shall not be liable for losses or damages resulting from handling or use of this product unless Marman USA, Inc. is promptly notified in writing of such loss or damage. In no case shall Marman USA, Inc. be liable for consequential or incidental damages or losses.

The terms of the **Warranty Disclaimer** and this **Limitation of Remedies** cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Marman USA, Inc. or the seller is authorized to vary or exceed the terms of the **Warranty Disclaimer** or this **Limitation of Remedies** in any manner.