



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

EPA Reg. Number:
1381-243

Date of Issuance:
SEP 16 2010

Term of Issuance:
Conditional

Name of Pesticide Product:
Tundra® Max Agricultural
Insecticide

NOTICE OF PESTICIDE:

- Registration
- Reregistration

(Under FIFRA as amended)

Name and Address of Registrant (include ZIP Code):

Winfield Solutions, LLC
3094 Country Club Rd.
Senatobia, MS 38668

~~Note: Changes in labeling or other information submitted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.~~

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is **conditionally** registered in accordance with FIFRA sec. 3(c)(7)(A), provided that:

1. You will submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. You will make the following label changes before you release the product for shipment:
 - a) Revise the EPA Registration Number to read "EPA Reg. No. 1381-243."
 - b) The acute toxicity profile for this product is as follows:

Acute oral toxicity	II
Acute dermal toxicity	IV
Acute inhalation toxicity	IV
Primary eye irritation	II
Primary skin irritation	IV
Dermal sensitization	Negative
 - c) In the *Restricted Use Pesticide* box delete, "Toxic to fish and aquatic organisms".

Signature of Approving Official:

Richard Gebken
Richard Gebken, Product Manager
Insecticide Branch/Registration Division (7505P)

Date:

September 16, 2010

Enclosure

- d) On page 2 under the *Personal Protective Equipment* section add, "Use of Human flaggers is prohibited – Mechanical flagging equipment must be used".
 - e) On page 4 under the *Agricultural Use Requirements* section replace "Chemical-resistant glove made out of any waterproof material" with "Chemical-resistant glove (barrier laminate or nitrile rubber or neoprene rubber or viton)".
 - f) Revise the maximum seasonal application rate for sweet corn to be consistent with the registered maximum seasonal application rate of 0.20lb ai/A bifenthrin.
 - g) Under Buffer Zones replace "Only apply this product onto fields where a maintained vegetative ... etc" with "Only apply this product containing bifenthrin onto fields where a maintained vegetative ... etc".
 - h) Under Citrus Orchard Floors replace "... restricted entry interval (REI) of 5 days unless PPE required for early entry is worn" with "... restricted entry interval (REI) of 10 days unless PPE required for early entry is worn".
3. Generate and submit the results of an one year storage stability and corrosion characteristics study to the Agency on completion. Make observations at 0, 3, 6, 9, and 12 months intervals.
 4. Please submit three (3) copies of your final printed labeling before releasing the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing amended labeling constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact BeWanda Alexander at www.alexander.bewanda@epa.gov or (703) 305-7460.

RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.



Tundra[®] Max
Agricultural Insecticide

**ACCEPTED
with COMMENTS
In EPA Letter Dated
SEP 16 2010**
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
1381-243

GROUP	1B	INSECTICIDE
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Active Ingredients:

Chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridyl) phosphorothioate	28.6%
Bifenthrin*: (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate	9.0%
Inert Ingredients**:	62.4%
TOTAL	100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum. **Contains xylene range aromatic solvents. This product contains 2.41 pounds chlorpyrifos per gallon and 0.76 pounds bifenthrin per gallon.

**KEEP OUT OF REACH OF CHILDREN
WARNING/AVISO**

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

FIRST AID ORGANOPHOSPHATE	
If swallowed	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If 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.
<p>NOTE TO PHYSICIAN: This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.</p> <p>NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.</p> <p>NOTE TO PHYSICIAN: Contains petroleum distillates. Vomiting may cause aspiration pneumonia.</p>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance call 1-877-424-7452.</p>	

EPA Reg. No. 1381- 243

EPA Est. No. _____

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

Net Contents 2.5 Gals. (9.46 Liters)

0/0917/9

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

WARNING. May be fatal if swallowed. Causes substantial but temporary eye injury. Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are barrier laminate and viton \geq 14 mils. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Mixers and loaders using a mechanical transfer loading system and applicators using aerial application equipment must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

In addition to the above, mixers and loaders using a mechanical transfer loading system must wear:

- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

See engineering Controls for additional requirements.

All other mixers, loaders, applicators and handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter
- Protective eyewear

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

Engineering Controls

Mixers and loaders supporting aerial applications must use a mechanical transfer system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for dermal protection, and must:

- Wear the personal protective equipment required above for mixers/loaders
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in an emergency, such as broken package, spill, or equipment breakdown: coveralls, chemical-resistant footwear and chemical-resistant headgear if overhead exposure

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the 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.

USER SAFETY RECOMMENDATIONS	
Users should:	
<ul style="list-style-type: none"> • Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. • 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. 	

Environmental Hazards

This pesticide is extremely toxic to fish, aquatic invertebrates, small mammals and birds. Use with care when applying in areas adjacent to any body of water. 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 make any applications when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

Physical/Chemical Hazards

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

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.

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control in your area.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during restricted-entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early reentry requirements pursuant to 40 CFR Part 170.

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 over short-sleeved shirt and short pants
- Chemical-resistant gloves made out of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Do not contaminate other pesticides or fertilizers by storage or disposal. Do not store above 100°F for extended periods of time. Do not freeze or store below 40°F. If crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids.

Spills

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. To confine spill, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package and used absorbent material in a holding container. Identify contents.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State pesticide or environmental control agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Disposal: Use label language appropriate for container size and type.

Nonrefillable containers. Do not reuse or refill this container. Clean container promptly after emptying.

Nonrefillable container equal to or less than 5 gallons. 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 other procedures approved by State and local authorities. Do not cut or weld metal containers.

Nonrefillable container greater than 5 gallons. 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 other procedures approved by State and local authorities. Do not cut or weld metal containers.

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 other procedures approved by State and local authorities. Do not cut or weld metal containers.

U-Turn Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

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

Chemigation Use Directions

Tundra Max may be applied to corn (field and sweet, including corn grown for seed), cotton, and soybeans. Unless otherwise indicated in specific use directions, the application rates for chemigation are the same as those recommended for broadcast application.

The following use directions must be followed when Tundra Max is applied through sprinkler irrigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injector with soap and water. Determine the amount of Tundra Max needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section and bring mixture to desired volume. Do not add crop oil when Tundra Max is applied by chemigation. Maintain continuous agitation during mixing and throughout the application. Set the sprinkler system to deliver the desired inches of water per acre. Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injector system according to calibration instructions in the following Special Use Precautions section. The mixture containing Tundra Max must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving to ensure uniform application at the correct rate. When the application is finished, flush and clean the entire irrigation and injector system prior to shutting down the system.

Special Use Precautions for Sprinkler Irrigation:

The following use directions will result in a safe and successful application of mixtures containing Tundra Max:

1. Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

For LEPA irrigation, a minimum of 0.75 inch of water per acre is recommended.

2. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water.

3. Contact your State Agricultural Extension Service specialists, equipment manufacturers or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect pests.

4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

5. A person knowledgeable of the chemigation system and responsible for its operations, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

6. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information.

7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

8. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

11. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. The metering pump must provide a greater pressure than that of the irrigation system at the point of injection. The pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70 and must contain Viton or Teflon seals.

12. To ensure uniform mixing of the insecticide into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or just ahead of an elbow or tee in the irrigation line so that the turbulence will assist in mixing. It is suggested that the injection point be higher than the insecticide tank to prevent siphoning.

13. The tank holding the insecticide mixture should be large enough to allow the system to complete the application with 1 filling. It must be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injector pump.

14. Calibration: In order to calibrate the irrigation system and injector to apply the mixture of Tundra Max, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes to cover the treatment area. This value equals the gallons per minute output that the injector must deliver. Convert the gallons per minute to milliliters or ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the timed output of the injector pump be checked at least twice before operation, and the system monitored during operation.

15. Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate non-target areas.

16. Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.

17. Reentry: Follow requirements in the Agricultural Use Requirements section or crop-specific sections of this label.

18. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Tundra insecticide should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation (except LEPA), a minimum of 0.5 inch per acre of irrigation water is recommended. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

BUFFER ZONES

Vegetative Buffer Strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply this product onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000 Fort Worth, Texas. 21 pp.

www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

Buffer Zone for Ground Application (groundboom, overhead chemigation)

Do not apply within 25 feet (100 feet in New York) of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial

10/22

Page 8 - Not Received by Agency

Aerial Drift Reduction Advisory Information

This section is advisory in nature and does not supersede the mandatory label requirements.

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 airstream 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 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 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 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 habitats for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Ground Boom Application

The following mandatory spray drift best management practices are required to reduce the likelihood of off-target drift movement from ground applications.

1. Choose only nozzles and pressures that produce a medium or coarse droplet size (255 to 400 microns volume median diameter), per ASABE Standard 572. See manufacturer's catalog or USDA/NAA Applicator's Guide for spray size quality ratings.
2. Apply with nozzle height no more than 4 feet above the ground or crop canopy.
3. Do not apply product when wind speed exceeds 10 mph as measured by an anemometer.

Orchard Airblast Application

The following mandatory spray drift best management practices are required to reduce the likelihood of off-target drift movement from airblast applications.

1. Nozzles must be directed so spray is not projected above the canopies.
2. Apply only when wind speed is 3 to 10 mph at the application site as measured by an anemometer outside of the orchard on the upwind side.
3. Outward pointing nozzles must be shut off when turning corners at row ends.

The applicator should take into account the following best management practices to reduce off-site spray drift. This section is advisory and does not supersede mandatory label requirements.

1. Number of nozzles, nozzle orientation and spray volume, air speed and wind direction are key factors in adjusting airblast spray delivery to match the height and density of the crop canopy. Airblast equipment should be adjusted to provide uniform coverage while minimizing the amount of spray movement over-the-top or completely through the crop canopy.
 - High air volumes deliver spray more efficiently than air at high speed. Reducing forward travel speed decreases the air speed necessary to deliver the spray to the top of the drop canopy.
 - Use air guides along with the number and orientation of spray nozzles to achieve the desired spray coverage and directional control.
2. The following steps should be taken to minimize drift and the amount of non-target spray:
 - Orient nozzles and adjust air speed/volume/direction to force the spray through the crop canopy but not allow drift past the canopy.
 - Shut off spray delivery when passing gaps in crop canopy within rows.
 - Spray the outside rows or orchards from outside in, directing the spray into the orchard and shutting off nozzles on the side of the sprayer away from the orchard.
 - When treating smaller trees, vines or bushes, shut off top nozzles to minimize over-the-top spray movement.

Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestations; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

Broadcast Foliar Application

Apply with conventional power-operated spray equipment using nozzles and spray pressures recommended for insecticides. Apply Tundra Max in a spray volume of not less than 2 gallons per acre (gpa) for aerial application equipment (fixed wing or helicopter) or not less than 10 gpa for ground equipment, unless otherwise specified. Increase spray volume to ensure adequate coverage with increased density and height of crop canopy. See Spray Drift Precautions section for recommendations on droplet size.

Ground Application

Orient the boom and nozzles so that uniform coverage is obtained. The swath width should not be wider than the boom. Follow nozzle manufacturer's recommendations for insecticide nozzles with respect to nozzle type, pressure, and spacing.

Broadcast Soil Application

Apply with conventional power-operated spray equipment that will apply the product uniformly to the soil surface. Use nozzles that produce medium or coarse droplets (235 to 400 microns). Unless otherwise indicated, a spray volume of 10 gpa or more is recommended. For band application, use proportionally less spray volume.

Aerial Application

Use a minimum spray volume of 2 gpa and follow recommendations for best management practices for aerial application, above. Marking of swaths by flagging, permanent markers or use of GPS equipment is recommended.

Rotational Crops

Crops for which bifenthrin tolerances exist, may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

Mixing Directions

To prepare the spray, add a portion of the required amount of water to the spray tank and with the spray tank agitator operating add Tundra Max. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

Tank Mixtures

Tundra Max may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

When Tundra Max is applied with a fertilizer solution, it is strongly recommended that a fertilizer pesticide compatibility agent be used. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture. Do not allow spray mixtures to stand overnight.

CITRUS ORCHARD FLOORS (28 Day PHI)

[NOT FOR USE IN MISSISSIPPI]

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days unless PPE required for early entry is worn.

Apply Tundra Max by ground equipment to bare soil beneath citrus trees. Remove weed growth or other obstructions that might prevent the spray from reaching the soil surface.

Tundra Max must be uniformly applied from the trunk to the drip line of tree. Apply the dosage specified in the table below in a minimum of 40 gallons of dilute spray per acre, using equipment that will apply the spray uniformly to the soil surface. Greater spray volume should insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.

Refer to table below for rates of application.

Pest	Rate Tundra Max/Acre	REMARKS
Diaprepes Root Weevil <i>(Diaprepes abbreviatus)</i> , Southern Blue Green Root Weevil <i>(Pachnaeus litus)</i> , Blue Green Citrus Root Weevil <i>(Pachnaeus opalus)</i> , Brown leaf Notcher <i>(Epicarus mexicanus)</i> , Little Leaf Notcher <i>(Artipus floridanus)</i>	42.1 – 53.3 fl. oz.	<p>Tundra Max protects citrus tree roots from Diaprepes and other citrus root weevil feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As citrus root weevil eggs hatch in new foliage, neonates fall to the soil surface beneath the tree and come in contact with Tundra Max as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.</p> <p>Timing of Tundra Max applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle and Little Leaf Notches typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notches typically exhibit three emergence peaks, spring, summer, and fall. Since emergence varies seasonally and by location, timing of Tundra Max application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Tundra Max soil barrier in place prior to drop of the neonates.</p> <p>Tundra Max is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of Tundra Max should be used in conjunction with good cultural</p>

	<p>practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevil and other pests.</p> <p>Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer. Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall. If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 53.3 fluid ounces of Tundra Max should be used to obtain the longest residual management of Diaprepes root weevil. If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 42.1 fluid ounces of Tundra Max can be applied early season and 42.1 fluid ounces of Tundra Max can be applied later in the season.</p>
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Use Restrictions:

- Do not apply in tank mixture with Evik herbicide.
- Do not apply through irrigation systems.
- Do not allow any application of Tundra Max to contact fruit or foliage.
- Do not allow meat or dairy animals to graze in treated areas.
- Maximum single application rate, based upon maximum single application limit of 1 lb. ai chlorpyrifos per acre, is 53.3 fl oz of Tundra Max.
- Do not apply more than a total of 84.2 fluid ounces of Tundra Max per acre per year, based upon a maximum limit of 0.5 lb ai bifenthrin per acre per year.
- Do not make more than 3 applications of Tundra Max or other products containing chlorpyrifos per year (does not include foliar applications to citrus trees).
- Do not make a second application of Tundra Max or other product containing chlorpyrifos within 10 days of the first application.
- Foliar applications of other products containing chlorpyrifos may be made in addition to the orchard floor treatments but must comply with the 10 day re-treatment interval.
- Ground application only. Do not apply by air.

**FIELD CORN (30 Day PHI) and SWEET CORN (21 Day PHI)
Grain, Silage and Corn Grown for Seed**

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 15 GPA for ground spray equipment or 2 to 5 GPA for aircraft equipment. Control may be reduced at low spray volumes under high temperature and wind conditions.

To improve control by aircraft, use 5 gallons of finished spray per acre particularly when initial populations are heavier than normal. Thorough coverage is essential to achieve control.

Chemigation: This product may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation section for application instructions.

This product may be tank mixed with glyphosate products when application is to be made to glyphosate-tolerant corn.

Refer to table below for rates of application and for spray volume recommendations for control of specific pests.

NOTE: Do not aerially apply in Mississippi.

PEST	RATE TUNDRA MAX/A	REMARKS
aphids, army cutworm, beet armyworm, billbugs (1), cereal leaf beetle, chinch bug, common stalk borer (6), corn earworm, corn rootworm adults cucumber beetle adults, cutworm species (2), European corn borer (4), fall armyworm, flea beetle, grasshoppers, greenbug, Japanese beetle adult, Lesser corn stalk borer, sap beetle, southern armyworm, southern corn leaf beetle, southwestern corn borer (5), stinkbugs, tarnished plant bug, true armyworm or armyworm <i>spp.</i> , webworms (3), western bean cutworm, yellowstriped armyworm	5.6 – 16.8 fl. oz.	<p>Pest-Specific Use Directions:</p> <ol style="list-style-type: none"> (1) For best billbug control, ground apply in a minimum spray volume of 20 to 40 GPA at 40 psi. If corn is less than 6 inches tall, apply in a 9- to 12-inch wide band over the row. For corn greater than 6 inches tall, apply using drop nozzles directed to the base of the plant. Do not reduce the application rate for banded or directed applications. Concentrate the full labeled dosage rate in the treated zone. (2) For cutworms, it is preferable to apply this product when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy, or crusted at time of treatment, worms may be protected from the spray and effectiveness will be reduced. Shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment may improve control. A second application may be required if damage or density levels exceed economic thresholds established for your area. (3) For webworm control, shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment is necessary. (4) University research indicates that achieving greater than 50% control of first-generation European borer with a single liquid insecticide treatment is highly dependent upon timing, insecticide placement and weather conditions. Make application for corn borer control with initial application at or shortly before egg hatch. (5) For southwestern corn borer, make application for corn borer control with initial application at or shortly before egg hatch. A second application may be applied 21 days later if needed due to reinfestation. <p>For control of other ear-attacking pests: Apply this product just before silking and repeat as necessary to maintain control.</p> <p>For control of other insect pests: Apply when pests first appear and repeat as necessary.</p> <p>Do not use this product in combination with a burndown herbicide for control of common stalk borer. For common</p>

		stalk borer control, treat approximately 11 days after application of glyphosate or after burndown with paraquat herbicide is complete (3 to 5 days).
Banks grass mite (1), carmine mite (2), two-spotted spider mite 2)	13.5 to 16.8 fl. oz.	<p>Pest-Specific Use Directions:</p> <p>(1) Apply for Banks grass mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.</p> <p>(2) For two-spotted spider mite and carmine mite control: Apply when colonies first form prior to leaf damage or discoloration and before wide-spread mite dispersal throughout the canopy.</p> <p>Higher rates will be necessary for heavier initial populations and corn under heat or drought stress. Field experience with dimethoate at 0.5 lb. a.i. per acre in tank mixture has demonstrated good control under these conditions.</p> <p>For mite control in Texas, New Mexico, Oklahoma, and Arizona, apply in a minimum of 5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment.</p>

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Use Restrictions:

- Do not apply more than 50.5 fl. oz. of Tundra Max per acre per season, based upon a maximum application limit of 0.3 lb. ai bifenthrin per acre per season.
- Do not make more than 3 applications of any product containing chlorpyrifos per season, including the maximum allowed of 2 granular applications, at the 1 lb ai chlorpyrifos rate.
- Do not make a second application of Tundra Max or other product containing chlorpyrifos within 10 days of the first application.
- Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Use of this product on corn is prohibited in all coastal counties.
- Do not apply in tank mixes with Steadfast or Lightning herbicides.

COTTON (14 Day PHI)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

[NOT FOR USE IN MISSISSIPPI]

Apply as a broadcast foliar spray using aircraft or ground spray equipment. Use a higher rate in the rate range when there is increased pest pressure. Use sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 GPA for ground spray equipment or 2 GPA for aircraft equipment. Increase spray volume when foliage is dense and/or pest population

is high and/or under high temperature and wind conditions. Treat when field counts indicate damaging insect populations are developing or present.

Chemigation: This product may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation section for application instructions.

Proper application methods are necessary to ensure thorough spray coverage and correct rate, and minimize off-target drift. Follow Application Directions for ground and aerial application and Spray Drift Management recommendations in Product Information section of this label.

Refer to table below for rates of application.

PEST	RATE TUNDRA MAX/A	REMARKS
European corn borer, soybean (banded) thrips, tobacco thrips	3.5 – 16.8 fl. oz.	Pest Specific Use Directions: To Control Boll Weevil: Apply this product at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. To Control Mites and Aphids: Apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established.
boll weevil, cabbage looper, cotton aphid cotton fleahopper, cotton leaf perforator, cutworms, fall armyworm, grasshoppers, leafhopper, plant bugs, saltmarsh caterpillar, southern garden leafhopper, stink bugs, tobacco budworm, whitefly, yellow striped armyworm	6.9 – 16.8 fl. oz.	
Beet armyworm, carmin spider mite, cotton bollworm, lygus Spp., pink bollworm, two-spotted spider mite	10.0 -16.8 fl. oz.	

Use Restrictions:

Do not make more than 3 applications of TUNDRA MAX or other products containing chlorpyrifos per crop season.

Do not apply more than 84.2 fl oz of this product per acre per season, based upon the maximum limit of 0.5 lb. ai bifenthrin per acre per season.

Do not make a second application of this product or other product containing chlorpyrifos within 10 days of the first application.

Do not allow meat or dairy animals to graze in treated areas.
 Do not feed gin trash or treated forage to meat or dairy animals.
 Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush[®], Ammo[®], Asana[®] XL, Baythroid[®], Capture[®], Danitol[®], Karate[®], Mustang[®], and Scout X-TRA[®].

SOYBEAN (28 Day PHI)

[NOT FOR USE IN MISSISSIPPI]

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 GPA at a rate of up to 16.8 fl oz of Tundra Max for ground spray equipment or 2 to 5 GPA for aircraft equipment.

Apply when field counts indicate damaging pest populations are developing or present and then at a minimum of 30-day intervals.

This product may be tank mixed with glyphosate products when application is to be made to glyphosate-tolerant soybeans. Use a higher rate in the rate range when there is increased pest pressure.

Chemigation: This product may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation section for application instructions.

Refer to table below for rates of application.

PEST	RATE TUNDRA MAX/A	REMARKS
Alfalfa Caterpillar, Aphids, Aster Leafhopper, Bean Leaf Beetle, Beet Armyworm, Cloverworm, Corn Earworm, Corn Rootworm Adult, Cucumber Beetles, Cutworms, European Corn Borer, Fall Armyworm, Flea Beetle, Grasshoppers, Imported cabbageworm, Japanese beetle Adult, Leafhoppers, Leafminer,	5.6 – 16.8 fl. oz.	On determinate soybeans, do not make more than 1 application after pod set.

Loopers, Mexican Bean Beetle Adult Pea Leaf Weevil, Pea Weevil, Plant Bug, Saltmarsh caterpillar, Sap Beetle, Southern Armyworm, Stink Bugs, Tarnished Plant Bug, Thrips, Tobacco budworm, Webworms, Western Bean Cutworm, Whitefly, Yellowstriped Armyworm		
Lygus <i>Sp.</i> , Whitefly, Two Spotted Spider Mite, Velvetbean caterpillar	13.5 – 16.8 fl. oz.	

Use Restrictions:

- Do not make more than 3 applications per year of this product or other product containing chlorpyrifos.
- Do not apply more than 50.53 fl oz of this product per acre per season, based upon a maximum limit of 0.3 lb. ai bifenthrin per acre per season.
- Maximum single application rate is 50.53 fl oz of Tundra.
- Do not make a second application of this product or other product containing chlorpyrifos within 14 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas or otherwise feed treated soybean forage, hay, and straw to meat or dairy animals.

**TOBACCO
(Pre-plant soil application)**

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a preplant broadcast spray to reduce the feeding damage caused by listed pests. Apply 24 to 48 hours before bedding and transplanting using a spray volume of 10 GPA or more. Incorporate immediately after application to a depth of 4 inches using suitable incorporation equipment.

Refer to table below for application rates.

PEST	RATE TUNDRA MAX/A	REMARKS
Armyworms, Cutworms, Tobacco flea beetle (larvae), Mole crickets, Stalk borers, Wireworms, White grubs	10.6 – 16.8 fl. oz.	Before broadcast application of this product onto existing beds, knock down beds to final shape for transplanting. Use of PTO-driven implements that will incorporate this product to a depth of 4 inches is recommended.
Aphids, Armyworm, Flea beetle (adults), Chinch bugs, Stink bugs, Japanese beetles, Grasshoppers, Cutworms, Tarnished plant bugs, Green bugs, Thrips, Whiteflies	6.8 – 16.8 fl. oz.	
Spider mites, Lygus spp.	16.8 fl oz/A	

Use Restriction:

Do not make more than 1 application of this product or other product containing chlorpyrifos per season.

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