

Nations Ag II Thidiazuron 50 WSB

**Cotton defoliant
Packaged in Water Soluble Bags
For Agricultural Use Only**

ACTIVE INGREDIENT:	
Thidiazuron: N-phenyl-N'-1,2,3-thiadiazol-5-ylurea	50.0%
INERT INGREDIENTS:	50.0%
TOTAL	100 %

EPA Reg. No. 72167-

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

IF SWALLOWED:

- * Immediately call a poison control center or doctor for treatment advice.
- * Do not induce vomiting unless told to do so by a poison control center or doctor.
- * Have person sip a glass of water if able to swallow.
- * Do not give anything by mouth to an unconscious person.

IF INHALED:

- * Move person to fresh air.
- * If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- * Call a poison control center or doctor for further treatment advice.

IF IN EYES:

- * Hold Eye open and rinse gently with water for 15 minutes.
- * Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- * Call a poison control center for treatment advice.

**IF ON SKIN
OR CLOTHING:**

- * Take off contaminated clothing.
- * Rinse skin immediately with water for 15-20 minutes.
- * Call a poison control center for treatment advice.

For MEDICAL Emergencies Involving This Product Call 1-800-308-5391

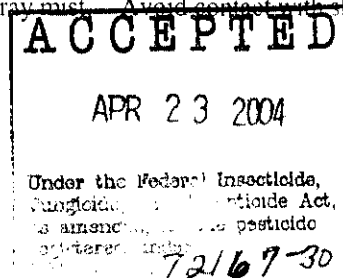
Have the product container with you when calling a poison control center or doctor or going for treatment.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

CAUTION

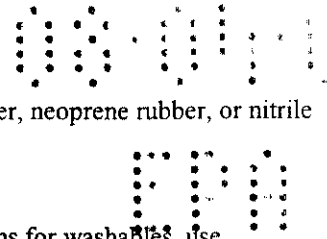
Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Do not contaminate food or feedstuffs.



PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Chemical Resistant Gloves Category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.
- Shoes plus socks.



Follow manufacturers instructions for cleaning, maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

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

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.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or 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. Do not apply when weather conditions favor drift from target area.

STORAGE AND DISPOSAL

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

STORAGE: Do not store under wet conditions. Handle carefully when stored at temperatures of less than 50°F to avoid breakage of soluble bags.

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

CONTAINER DISPOSAL: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. **DO NOT REUSE EMPTY CONTAINER.**

In case of chemical spill, call 800-424-9300

GENERAL INFORMATION

This package contains Thidiazuron 50 WSB in water-soluble bags. Inner bags dissolve in water and contents disperse. After opening outer package, open foil liner, immediately dump entire unopened inner bags into the mix tank. Do not handle soluble bags or expose them to moisture, since this may cause breakage.

Thidiazuron 50 WSB is a cotton defoliant used for removal of leaves prior to harvesting. Thidiazuron 50 WSB disperses easily in water and can be used in any ground and aircraft equipment designed for application of wettable powders. It may take several days before the effect of Thidiazuron 50 WSB becomes noticeable. Low temperatures may require higher application rates and/or longer times for more complete defoliation. Thidiazuron 50 WSB inhibits regrowth after defoliation, which can reduce staining of lint during harvest and ginning.

USE PRECAUTIONS

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

Rainfall within 24 hours after application will reduce effectiveness. Use only freshly prepared sprays. Do not store spray mixture overnight.

Do not feed foliage from treated cotton plants or gin trash to livestock.

Do not plant the following crops earlier than the specified periods after application:

<u>CROP</u>	<u>INTERVAL</u>
Small grain, sorghum, corn or root crops (except carrots, onions, and sugar beets)	two (2) weeks
Legumes (including alfalfa) or leafy vegetables (except lettuce and spinach)	two (2) months
Sugar beets	four (4) months
Carrots, onions, or spinach	nine (9) months
Lettuce	nine (9) months, and only following deep plowing (12-15 inches)

Do not use immature crops for food or feed.

Do not allow spray drift to contact crops other than the target crop of mature cotton, or cotton which you desire to defoliate, as this product may injure or defoliate other crops.

Use particular care when applying Thidiazuron 50 WSB adjacent to lettuce, citrus, or cantaloupe. Tank-mixes with organophosphates may increase non-target crop phytotoxicity.

PRACTICES TO LOWER POTENTIAL FOR DRIFT ONTO NON-TARGET CROPS

Thidiazuron 50 WSB sprays may drift to non-target crops during applications, particularly under windy conditions.

To help reduce the drift potential, use the following practices:

- Do not apply by ground or air when wind speeds exceed ten (10) miles per hour at the time of application. Follow local recommendations if wind speeds of less than ten (10) miles per hour are specified in those recommendations.
- Use of low nozzle pressure (20 - 30 psi) is recommended.

- Do not apply when a temperature inversion is present or when conditions favor an inversion prior to completing application(s).
- Use the largest nozzle orifice possible that permits proper deposition and coverage of product.
- **Do not apply by air within one-half (1/2) mile of lettuce. Do not apply by ground equipment within 100 feet of lettuce.**
- **Do not apply by air when citrus in flush is within five (5) miles downwind of the point of application. Do not apply by ground when citrus in flush is within one-half (1/2) mile downwind of the point of application.**

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.

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.

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

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

- Coveralls
- Chemical-resistant gloves category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.
- Shoes plus socks

TIME OF APPLICATION

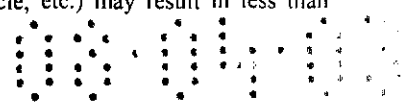
Apply this defoliant only to mature cotton plants at least 5 days before harvest when all bolls you expect to harvest are mature. A boll is "mature" when it is too hard to be dented when squeezed between thumb and fingers, is difficult to slice with a sharp knife, and/or when seeds cut in cross sections have fully developed cotyledons, as evidenced by an absence of jelly within the seed.

NOTE: Good defoliation of cotton is dependent upon active cotton growth, high humidity and high moisture content in the cotton leaves.

Use of Thidiazuron 50 WSB alone (without a tank-mix partner) when nighttime temperatures are expected to fall below 60° F can result in less than desirable defoliation and/or regrowth inhibition.

Performance is variable under low temperatures. Ideally, nighttime temperatures 2 - 3 days prior to and following application should be above 60° F or total defoliation and regrowth inhibition can be reduced.

Use of this defoliant on heat and/or drought-stressed cotton (low leaf moisture, thick cuticle, etc.) may result in less than satisfactory defoliation and regrowth inhibition.



USE OF ADJUVANTS (CROP OILS)

The use of EPA approved adjuvants such as petroleum-based crop oils or penetrating oils can improve performance during conditions of low nighttime temperatures (60° - 65°F) or when defoliating drought-stressed cotton. The use of adjuvants is recommended when applying to cotton in the desert Southwest. Refer to the specific adjuvant label for rate recommendations.

PRECAUTION: The addition of adjuvants can cause desiccation and/or leaf freezing during periods of high temperatures. The use of compounds that desiccate leaf tissue is not recommended.

MIXING INSTRUCTIONS

Fill the spray tank with one-half of the total amount of water to be used. After opening each package to be used, open its foil liner. Immediately dump the entire contents of the required number of packages of soluble bags into the mix tank. Fill the tank with the additional water required and then start the agitator. Use entire contents of each container.

TANK-MIX ADJUVANTS

When tank-mixing with organophosphates, the use of a surfactant or compatibility agent is recommended to improve tank clean-out and defoliation. Before mixing in the spray tank, a small-scale compatibility test should be conducted.

Use only products that are exempt from tolerance under 40 CFR 180.1001, and always follow the mixing instructions on the label of the appropriate adjuvant.

APPLICATION

Use the specified rates in a sufficient amount of water to give complete coverage of the foliage with uniform wetting of leaf surfaces. Agitate the spray mix during application.

DOSAGE

One outer package (5 x 1 lb. bags) of Thidiazuron 50 WSB treats 12.5 - 25 acres at 0.2 - 0.4 lbs. Thidiazuron 50 WSB per acre. Apply in 10 - 25 gallons of spray per acre by ground equipment and 2-10 gallons per acre by air. Use the higher rates during periods of low temperatures (60° - 65°).

Two applications may be necessary to defoliate rank cotton, but do not exceed a total of 1 box per 8.3 acres (0.6 lbs./acre)

BOTTOM DEFOLIATION (FOR USE IN ARIZONA ONLY): Thidiazuron 50 WSB, when used as instructed, improves air circulation and helps reduce boll rot caused by moisture. Use 0.1 lbs. formulated product per acre in 10 - 25 gallons of water per acre. Apply to the bottom 1/3 of plant only, with timing of the application based upon the latest date when ground application equipment can enter the field without crop damage.

PRECONDITIONING (FOR USE IN ARIZONA AND CALIFORNIA ONLY):
Thidiazuron 50 WSB may be used as a pre-conditioner to enhance the activity of a defoliant application.

Apply at 0.1 - 0.2 lbs. formulated product in 10 - 25 gallons of water per acre by ground application or 2 - 10 gallons of water per acre by aerial application 7 - 14 days prior to the use of another defoliant. Refer to the second product label prior to use for complete recommendations.

NOTE: For all of the following tank mixes, follow all precautions, restrictions, and directions for use listed on the label(s) of the products mixed with Thidiazuron 50 WSB. Where brand name products are listed, EPA registered generic equivalents can be substituted in the tank mix.

TANK-MIX OF THIDIAZURON 50 WSB PLUS PREP¹ FOR BOLL OPENING: The tank-mix of Thidiazuron 50 WSB plus Prep® is recommended to improve overall defoliation, and as an aid in accelerating the opening of mature, unopened cotton bolls. Activity will be best where the tank-mix is applied to mature cotton plants. (See **Time Of Application** section of this label.) Do not apply tank-mix before sufficient unopened bolls have matured to produce the desired cotton yield. If nighttime temperatures fall below 60° F, unsatisfactory defoliation and regrowth inhibition may result. Certified cottonseed producers should determine boll and seed maturity prior to treatment.

Apply 0.1 - 0.4 lbs. of this product plus Prep at 1.0 - 2.0 lbs active ingredient per acre. The higher rate of Thidiazuron 50 WSB should be used where excessive regrowth is anticipated, or during cooler temperatures.

Apply as a dilute spray as follows:

<u>Application Method</u>	<u>Gallons of Water/Acre</u>
Aerial	3-10
Ground	10-50

TANK-MIX WITH PREP FOR DEFOLIATION ENHANCEMENT: Lower rates of Prep may be tank-mixed with Thidiazuron 50 WSB to enhance defoliation without providing boll-opening activity. Prep may also be applied for boll opening following the application of Thidiazuron 50 WSB plus Prep at a defoliation enhancement rate. Read and follow the Prep label, and do not exceed a maximum of 2.0 lb. ai/acre for combined uses of PREP per acre per year.

Use Thidiazuron 50 WSB at a rate of 0.1 - 0.4 lbs. formulated product plus Prep at 1/3 pint per acre (0.25 lbs. ai/acre). The higher rates of Thidiazuron 50 WSB should be used where excessive regrowth is anticipated, or during cooler temperatures.

TANK-MIX OF THIDIAZURON 50 WSB PLUS DEF 6² OR THIDIAZURON 50 WSB PLUS FOLEX 6EC³: These tank-mixes are recommended to improve defoliation and inhibit regrowth under less than ideal conditions such as when nighttime temperatures are expected to be 60°F or less on the date of application and for three days following application.

Apply to mature cotton plants with 60% or more open bolls for best results.

RATES

Thidiazuron 50 WSB + Def 6: Use 0.1 - 0.4 lbs Thidiazuron 50 WSB + 0.5 - 2.0 pints Def 6.

Thidiazuron 50 WSB + Folex 6 EC: Use 0.1 - 0.4 lbs Thidiazuron 50 WSB + 0.5 - 2.0 pints Folex 6EC.

The higher suggested rate of Thidiazuron 50 WSB should be used where excessive regrowth is anticipated.

Note: Maximum label rates of Thidiazuron 50 WSB when applied in a tank-mix with phosphate defoliant during very high air temperatures can cause desiccation.

Use the lower recommended rate of Def 6 or Folex 6EC under ideal nighttime temperature conditions (65°F); use the higher recommended rate during less than ideal conditions.

Apply as a dilute spray in 5 - 10 gallons of water per acre by air or 10 - 25 gallons of water per acre with ground equipment.

The following mixing sequence is recommended when applying Def 6 or Folex 6EC defoliant plus Thidiazuron 50 WSB as a tank-mix

1. Add required water to spray tank, agitate.
2. Add Thidiazuron 50 WSB according to label directions (see **mixing instructions**).
3. Add Def 6 or Folex 6EC at the desired rate after Thidiazuron 50 WSB has completely dispersed.

A second application of the tank-mix may be made when necessary, but not exceeding a total of 0.5 lbs Thidiazuron 50 WSB per acre.

DO NOT USE TANK-MIXES OF THIDIAZURON 50 WSB PLUS DEF 6 OR FOLEX 6EC IN THE RIO GRANDE VALLEY COUNTIES OF STARR, HIDALGO, WILLACY, AND CAMERON.

IMPORTANT CLEANOUT INSTRUCTIONS

Tank-mixes of Thidiazuron 50 WSB with organophosphates may form a residue in application equipment. This residue can be removed by flushing the entire system with a commercial tank cleaner if done **while fresh and moist****.

Do not allow the spray solution to dry in the application equipment. Clean all equipment (mix tanks, pumps, transfer lines, application tanks, sumps, booms, nozzles and all related equipment) thoroughly with cleaner and water **immediately following application.**

Any small quantities of Thidiazuron 50 WSB that remain in inadequately cleaned equipment may be released during subsequent applications and may cause damage to crops. Nations Ag II accepts no liability for damage to crops due to inadequately cleaned equipment.

** Some cleaners have shown promise in cleaning dried tank residues. The procedure for removing dried residues requires allowing the diluted cleaning solution to stand in equipment, filled to capacity, for 7 days followed by thorough flushing.

SEQUENTIAL APPLICATION PRECAUTION

Do not make a sequential application of Thidiazuron 50 WSB following any defoliant or desiccant **except** Thidiazuron 50 WSB or tank mixes with Thidiazuron 50 WSB. Reduced activity of the second treatment will result.

¹Prep, ²Def 6, and ³Folex 6EC are registered trademarks of Bayer Corporation, Agricultural Chemical Division.

IMPORTANT: Read the information below before using this product. If the terms are not acceptable, you should return the unopened product container immediately for a complete refund.

LIMITED WARRANTY, TERMS OF SALE, AND LIMITATION OF LIABILITY

Upon purchase or use of this product, purchaser and user agree to the following terms:

Warranty: Nations Ag II, LLC, (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. The Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose; no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

Terms of Sale: The Company's directions for use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. All such risks are assumed by the user.

Limitation of Liability: The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. Under no circumstances shall the Company be liable for any special, indirect incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

Product Use Questions? Call 800-979-8994.

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