

09/07/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

September 7, 2011

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Danielle A. Larochelle  
Nufarm Americas Inc.  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527

Subject: Application for Label Notification to update the storage and disposal statement.  
Agtrol International Typrus™  
EPA Reg. No.: 55146-85  
Your submission dated August 30, 2011  
Decision Number: 454274

Dear Ms. Larochelle:

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under PR Notice 2007-4 dated above. A preliminary screen of this request has been conducted for its applicability under PR Notice 2007-4 and it has been determined that the action(s) requested falls within the scope of PR Notice 2007-4. Our records have been duly noted and the label submitted with this application has been stamped "Notification Accepted".

The label, cover letter, and EPA Form 8570-1 you submitted all indicate the product name as "TypRus Plant Growth Regulator Solution"; however, the Agency's Office of Pesticide Programs Information Network (OPPIN) database lists the product name as it was initially registered as "Agtrol International Typrus™". If you wish to change the primary brand name or add an alternate brand name, you must submit the product name change as a notification to the Agency under PR Notice 98-10.

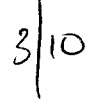
If you have any questions concerning this action, please feel free to contact Mr. Colin Walsh at (703) 308-0298 or via email at [walsh.colin@epa.gov](mailto:walsh.colin@epa.gov).

Sincerely,

*Linda A. Hollis*

Linda A. Hollis, Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention  
Division (7511P)





Phone: 630-455-2000 ■ Fax: 630-455-2001

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# TypRus®

Plant Growth Regulator Solution

Notification Accepted

Date: SEP 07 2011

Reviewer: C. Walsh

**Active Ingredient:**

Gibberellins A<sub>4</sub>A<sub>7</sub> ..... 2.0% w/w

**OTHER INGREDIENTS:** ..... 98.0% w/w

TOTAL: ..... 100.0% w/w

(Contains 21 grams active ingredient per liter or 9.93 grams per pint)

**KEEP OUT OF REACH OF CHILDREN**

## **WARNING - AVISO**

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

**SEE LABEL FOR FIRST AID AND PRECAUTIONARY STATEMENTS**

**For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300**  
**For Medical Emergencies Only, Call (877) 325-1840**

EPA REG. NO. 55146-85  
EPA EST. NO. \_\_\_\_\_

MANUFACTURED FOR  
NUFARM AMERICAS INC.  
AGT DIVISION  
150 HARVESTER DRIVE  
BURR RIDGE, IL 60527



**Net Contents: 32 Fluid Ounces**



FIRST AID	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice</li> </ul>
<b>IF ON SKIN OR CLOTHIN</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>HOT LINE NUMBER</b> Have the product container with you when calling a poison control center or doctor, or going for treatment advice. You may also contact 1-877-325-1840 for emergency medical treatment information	

**PRECAUTIONARY STATEMENTS  
HAZARD TO HUMANS (AND DOMESTIC ANIMALS)  
WARNING - AVISO**

Causes substantial but temporary eye injury. May be fatal if inhaled, or absorbed through skin. Do not breathe vapor or mist. Wear a mist-filtering respirator. Wear protective eyewear such as safety goggle or face shield. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco or using the toilet. Remove and wash contaminated clothing before use.

**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 selection chart.

All applicators, handlers, mixers and loaders must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Dust / mist filtering respirator (MSHA/NIOSH approval number prefix TC-21), or a NIOSH approved respirator with any R,P or HE filter
- Protective eyewear
- Chemical-resistant apron when cleaning equipment, mixing or loading
- For overhead exposure, wear chemical resistant headgear

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

**User Safety Recommendations**

User should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## Environmental Hazards

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

## 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 state or tribal agency responsible for pesticide

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment

(PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 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 worn over short-sleeved shirt and short pants
- Chemical resistant gloves, such as barrier laminate; butyl, nitrile, or neoprene rubber; polyvinyl chloride (PVC); or viton
- Shoes plus socks
- Protective eye wear
- Dust / mist filtering respirator (MSHA/NIOSH approval number prefix TC-21), or a NIOSH approved respirator with any R,P or HE filter

## APPLICATION INSTRUCTIONS

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

### Fruit Russet Suppression in Apples

TYPRUS® is a plant growth regulator containing gibberellins A<sub>4</sub> and A<sub>7</sub> which can reduce the development of physiological fruit russetting in apples when applied in a post-bloom spray program. Used in years when russet conditions are present, TYPRUS® may boost overall fresh market grades of the crop.

Physiological russetting is generally associated with the presence of water on the fruit surface during the first 30 to 40 days of fruit development. Russet severity at a given location is therefore specifically influenced by the weather conditions during and following the bloom period. The key conditions influencing russet include precipitation, humidity, and temperature. TYPRUS® may act only on that russet caused by climatic factors active early in fruit development and will not reduce damage associated with mechanical forces such as limb or pedicel rub, insect damage, or russet produced by certain pesticides.

### Application Rate

Apply 26 to 40 fluid ounces per acre for a total seasonal rate.

### Timing of Application

Apply TYPRUS® as two to four consecutive sprays beginning at petal fall, and continuing at 7 to 10 day intervals. This spray timing corresponds to the most sensitive russet development period shown to occur in apples.

### Method of Application

Apply 10 fluid ounces\* (15 ppm) to 13 fluid ounces (20 ppm) of TYPRUS® in 100 gallons of water per acre, per application for 2 to 4 total applications. Number and rate of applications must be based on both tree size and local weather conditions. In general, as tree size and overall rainfall increase, increase the number of applications. This increase is necessary to maintain adequate coverage of the developing fruit surface during the most sensitive russet period.

**NOTE:** Do not apply more than 40 fluid ounces of TYPRUS® per season.

\*Best russet control can be expected with four 10 fluid ounce (15 ppm) per acre applications of TYPRUS®.

### Application Considerations

1. Do not use with spray surfactants, spreader stickers, etc. since these materials have been shown to induce russet.
2. Do not use in excessive spray volume, (i.e. greater than 100 gal/acre) since excess moisture has been shown to induce russet.
3. Use a properly calibrated and adjusted sprayer that insures uniform and complete coverage of all foliage and fruitlets.
4. Approximately 85% of the spray volume must be directed into the upper two-thirds of the trees.
5. To minimize excessive spray drift, apply when air is calm.
6. Rainfall within six hours after spraying can reduce activity of TYPRUS®.
7. TYPRUS® can be applied in combination with other materials; refer to respective labels for directions and precautionary statements.



## PREHARVEST FRUIT CRACKING SUPPRESSION IN STAYMAN APPLES

**NOTE: Do not treat** Stayman apples that have received TYPRUS® application to suppress russet for cracking suppression during the same growing season.

TYPRUS® is a plant growth regulator containing gibberellins A<sub>4</sub> and A<sub>7</sub>. This material has been shown to suppress preharvest fruit cracking of 'Stayman' apples when used as directed.

TYPRUS® must be applied at least two to three weeks before any fruit cracking is observed in the orchard. Past history of cracking irritation can serve as a guide to when the first application should be made. If the material is applied after cracking has started, effectiveness of the product will be greatly reduced. Since cracking can occur over an extended period of time, multiple applications are required.

Many factors influence fruit cracking in 'Stayman' apples. TYPRUS® is one component of a total management program.

### Application Rate and Timing

Apply 16 to 32 fluid ounces of TYPRUS® per acre per application. Higher application rates will provide better suppression of cracking.

### Timing of Application

Apply TYPRUS® in three to six consecutive sprays beginning at least 2 to 3 weeks before fruit cracking is likely to be observed in the orchard. Depending on geographical location and other factors influencing fruit cracking, make the initial application between mid-June and mid-July. Apply subsequent sprays at 14 to 21 days. Best cracking suppression can be expected when at least four consecutive sprays are applied at 14 to 21 day intervals. When conditions favor heavy cracking, better results can be obtained by using the higher specified rates, the greater specified number of applications, and the closer specified spray intervals.

### Method of Application

Apply material using conventional spray equipment. Use sufficient water volume to obtain good coverage of the fruit surface. Apply as a complete spray (i.e. treat every row middle).

### Application Considerations

1. Use of a nonionic wetting agent approved for use on food will improve spray coverage and enhance absorption.
2. Since TYPRUS® must be absorbed to be effective, best performance can be expected with good absorption conditions and healthy trees. High relative humidity and slow drying conditions favor maximum absorption of TYPRUS®. Application in morning or evening are preferable. Avoid conditions favoring rapid drying of spray deposits.
3. Use a properly calibrated and adjusted sprayer that insures uniform and complete coverage of all foliage and fruit. Spray volume must be adjusted to tree size and density.
4. Do not use excessive spray volumes since excess moisture can increase the potential for fruit cracking.
5. Approximately 85% of the spray volume must be directed into the upper two-thirds of the trees.
6. Rainfall within six hours after spraying can reduce activity of TYPRUS®.
7. TYPRUS® may be tank-mixed with most common pesticides labeled for use on apples.



## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store below 77°F (25°C). Keep containers tightly closed when not in use.

**Pesticide Disposal:** Wastes resulting from use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:**

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type / size."

### Nonrefillable Containers 5 Gallons or Less:1

Nonrefillable container: **DO NOT** reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**[Nonrefillable containers larger than 5 gallons:]**

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Refillable 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

## WARRANTY DISCLAIMER

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

## LIMITATION OF LIABILITY

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

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