Title

Petition for a Three-Year Extension of Exclusive Use Data Protection for Tolfenpyrad As Provided For Under FIFRA Section 3(c)(1)(F)(ii)

Data Requirement
None

Author
Scott Ludwig, Ph.D.

Date
January 5, 2017

Report Number
TOL-GEN-25

Submitted by
Nichino America Inc.
4550 New Linden Hill Rd, Suite 501
Wilmington, DE 19808

No Claim of Confidentiality

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA sec. 10(d)(1)(A), (B), or (C) and which pertains to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provisions regarding disclosure to multinational entities under FIFRA 10(g).

Submitter: Lydia Cox Date: 1-8-17

Typed Name of Signer: Lydia Cox, Ph.D., DABT

Typed Name of Company: Nichino America Inc.

Good Laboratory Practice Compliance Statement

Good Laboratory Practice Standards, 40 CFR Part 160, are not applicable to this submission.

Author: Scott Ludwig Date: 05-Jan-2017

Typed Name of Signer: Scott Ludwig, Ph.D.

Typed Name of Company: Nichino America Inc.

Sponsor/Submitter: Lydia Cox Date: 1-8-17

Typed Name of Signer: Lydia Cox, Ph.D., DABT

Typed Name of Company: Nichino America Inc.

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Section 1. Tolfenpyrad Products and Background Information

Table 1. Registered Pesticide Products Containing Tolfenpyrad

Product	EPA Registration Number	Alternate Brand Names
Tolfenpyrad Technical	71711-30	Not applicable
Tolfenpyrad 15EC Insecticide	71711-31	Torac® Insecticide; Hachi Hachi Insecticide
Tolfenpyrad 15SC Insecticide	71711-36	Apta® Insecticide; Bexar® Insecticide; Hachi Hachi® SC Insecticide

General Background Information

Tolfenpyrad is currently registered under FIFRA section 3(c)(5) for use on the following crops:

- Citrus Fruit Group (Crop Group 10-10)
- Cotton
- Fruiting Vegetable (Crop Group 8-10) (Exemption granted under FIFRA Section 18 for use in Florida)
- Grape
- Indoor Greenhouse use on ornamental plants
- Leafy Vegetables (Crop Group 4) – except brassica vegetables
- Potato
- Stone Fruit Group (Crop Group 12-12); pomegranate; persimmon
- Tree Nuts (Crop Group 14-12)

The active ingredient tolfenpyrad is a contact insecticide and fungicide of the pyrazole class registered for control or suppression of a wide range of insect pests and diseases including Coleoptera, Diptera, Hemiptera, Lepidoptera, Orthoptera, and Thysonoptera insects, and downy and powdery mildews. Tolfenpyrad is very effective in controlling all development stages of most target pests. In addition, its rapid action will suppress transmission of and crop losses from insect-vectored diseases such as tomato spotted wilt virus (TSWV), groundnut ringspot virus (GRSV), and tomato chlorotic spot virus (TCSV), and tomato necrotic streak virus (TomNSV) in tomatoes, citrus greening in citrus, and zebra chip in potatoes.

Tolfenpyrad is classified in the IRAC mode of action group 21A[1], METI 1 inhibitors, which inhibits cell respiration when it comes in contact with target pests. While it is not considered to have a unique mode of action, it does offer a new mode of action for most of its target pests including thrips, aphids, soft scales, plum curculio, and cherry fruit fly. In addition, tolfenpyrad is also classified in the FRAC mode of action group 39[2], METI 1 inhibitors. Tolfenpyrad inhibits cell respiration when it comes in contact with target pests. This is a unique mode of action for a fungicide in the United States.

Details on the crops and specific documentation supporting this petition for extension of the exclusive use period for tolfenpyrad per the required criteria cited in FIFRA Section 3(c)(1)(F)(ii) are provided in Section 3.

Residue trials were conducted in crops and the crop group representative crops, including major and minor crops, to support the numerous minor crops on which tolfenpyrad is currently registered.

Table 2 shows the minor use crop candidates included in this petition for extension of exclusive use of data and the corresponding residue data used to support the registration of these minor crops.

Tolfenpyrad provides an additional mode-of-action rotation partner to reduce the selection pressure on commercially available insecticides and helps to preserve these chemical classes for continued use in the future. To date, tolfenpyrad has shown no cross-resistance to other insecticides currently in the market. Tolfenpyrad is a useful tool for inclusion in IPM systems for management of economically important insect species.

Section 2. FIFRA Section 3(c)(1)(F)(ii) Criteria

Nichino America Inc., the sole registrant of the proprietary insecticide tolfenpyrad for agricultural crop and ornamental plant use, is hereby petitioning the Environmental Protection Agency for a three-year extension of exclusive use data protection, as provided under FIFRA Section 3(c)(1)(F)(ii).

FIFRA Section 3(c)(1)(F)(ii) states that:
The period of exclusive data use provided under clause (i) shall be extended 1 additional year for each 3 minor uses registered after the date of enactment of this clause and within 7 years of the commencement of the exclusive use period, up to a total of 3 additional years for all minor uses registered by the Administrator if the Administrator, in consultation with the Secretary of Agriculture, determines that, there are insufficient efficacious alternative registered pesticides available for the use;

> *(I) The alternatives to the minor use pesticide pose greater risks to the environment or human health;*
> *(II) The minor use pesticide plays or will play a significant part in managing pest resistance; or*
> *(III) The minor use pesticide plays or will play a significant part in an integrated pest management program.*

Further, in the US EPA question & answer document[3] concerning the exclusive use extension policy, the Agency clarifies that only one of the four criteria is necessary to qualify for consideration:

"To qualify to be considered under § 3(c)(1)(F)(ii) of FIFRA for an extension of the exclusive use period, the minor uses must be registered within the first 7 years from the start of the exclusive use period and meet one of the four criteria listed in FIFRA § 3(c)(1)(F)(ii)."

The four criteria listed in FIFRA § 3(c)(1)(F)(ii) include:

> *"1. There are insufficient efficacious alternative registered pesticides available for the use;*
> *2. The alternatives to the minor use pesticide pose greater risks to the environment or human health;*
> *3. The minor use pesticide plays or will play a significant part in managing pest resistance; OR*
> *4. The minor use pesticide plays or will play a significant part in an integrated pest management program."*

Additionally, in the same question & answer document, the Agency states that all minor-use crops contained in a given crop grouping potentially qualify for consideration:

"If the data for the representative crops in a crop grouping have been submitted and support establishment of the crop grouping, the Agency will count the non-representative minor crops within a crop grouping provided that they were registered within 7 years of the commencement of the initial exclusive use period for the active ingredient and the registrant is marketing the product for the minor crops. However, the non-representative minor crops must meet one of the

four criteria identified in § 3(c)(1)(F)(ii) in order to be eligible to be considered for extension of exclusive use data protection."

As described in this petition, the tolfenpyrad registrations meet the criteria cited in FIFRA Section 3(c)(1)(F)(ii) for consideration of extension of the exclusive use period for data protection. Tolfenpyrad Technical (EPA Reg. No 71711-31) and the end-use product Tolfenpyrad 15EC Insecticide (EPA Reg. No. 71711-31) for ornamental greenhouse use were granted US registrations on July 28, 2010, and the end-use product Tolfenpyrad 15EC Insecticide and Tolfenpyrad 15SC Insecticide (EPA Reg. No 71711-36) were granted outdoor food crop registration in the US on December 23, 2013.

Section 3. Tolfenpyrad Minor Use Crop Candidates

Table 2. Tolfenpyrad Minor Use Crop Candidates

Commodities	Crop Groups	Residue data to support	MRID #
Arugula	4	Leaf lettuce, head lettuce, spinach, celery	48250464
Endive	4	Leaf lettuce, head lettuce, spinach, celery	48250464
Radicchio (red chicory)	4	Leaf lettuce, head lettuce, spinach, celery	48250464
Spinach	4	Leaf lettuce, head lettuce, spinach, celery	48250464
Swiss chard	4	Leaf lettuce, head lettuce, spinach, celery	48250464
Eggplant	8-10	Tomato, pepper	48250463
Pepper, bell,	8-10	Tomato, pepper	48250463
Pepper, nonbell	8-10	Tomato, pepper	48250463
Grapefruit	10-10	Orange, grapefruit, lemon	48250468
Kumquat	10-10	Orange, grapefruit, lemon	48250468
Lemon	10-10	Orange, grapefruit, lemon	48250468
Lime	10-10	Orange, grapefruit, lemon	48250468
Tangelo	10-10	Orange, grapefruit, lemon	48250468
Tangerine (Mandarin)	10-10	Orange, grapefruit, lemon	48250468
Cherry, sweet	12-12	Cherry, peach, plum	48250467
Cherry, tart	12-12	Cherry, peach, plum	48250467

Thirteen of the minor use crop candidates, supported by residue data from either individual crop or representative crops of crop groups, were registered within the requisite seven-year period (prior to July 28, 2017) and added to the FIFRA section 3(c)(5) tolfenpyrad technical and end-use product labels. The minor use crop candidates pepper, bell; pepper nonbell; and eggplant, supported by residue data from either individual crop or representative crops of crop groups, were approved under an emergency exemption according to FIFRA Section 18 on Feb. 29, 2016 and time-limited tolerances were established on October 5, 2016 (expiration date = December 31, 2019), also within the requisite seven-year period.

Section 4. Minor Use Crop Candidate Justification for Exclusive Use of Tolfenpyrad

In the 2016 US EPA question & answer document[4], the Agency suggested "the request package may be written on a crop-by-crop basis to make it easier for the reviewer to assess your request. BEAD finds information presented in a bulleted list easier to follow rather than a narrative. For each crop/site OPP recommends that the applicant/registrant describe the following:

- The date of first registration and date when the minor uses were registered.
- How the pesticide is being marketed for these minor uses.
- The acres grown (with reference to the source of these data), minor crop status can be determined based on total acreage or economics (see sections below).
- The target pest (i.e. a pest that can lead to economic impacts if not controlled) or beneficial insect (i.e. the pesticide is less toxic to beneficial insects).
- The criterion that is being met (BEAD only reviews criteria I, III, and IV) and a detailed description of why the pesticide meets the criteria, and all supporting evidence (publications, websites, reports, etc.)."

The information for each crop group will be presented using each of these bullet points.

4.1 Crop Group 4: Leafy Vegetables (Except BRASSICA Vegetables) Group

- Tolfenpyrad Technical was granted US registration on July 28, 2010 and the registration for use on the Leafy Vegetables (Except BRASSICA Vegetables) Group was received on December 23, 2013.

- Nichino America is currently marketing Torac on leafy vegetable to growers by use of informational technical sheets, advertisements, and sales calls to distributors, crop consultants, and growers. Product launch meetings were conducted with growers and PCAs in Arizona on the proper use of Torac. Numerous efficacy studies have been conducted in Arizona and California evaluating Torac against key pests of leafy vegetables. Tolfenpyrad is still pending registration in California.

- Acres grown according to 2012 US Census of Agriculture[5]:
  - Arugula not listed
  - Endive 2,030
  - Radicchio not listed
  - Spinach 46,377
  - Swiss chard not listed

- Torac use on leafy vegetables has been targeted primarily at thrips species, including western flower thrips, aphids and powdery mildew.

- Criterion III: The minor use pesticide plays or will play a significant part in managing pest resistance.

  Tolfenpyrad is the only active IRAC Group 21A insecticide registered for use against thrips and aphids on leafy vegetables[6]. Dr. John Palumbo at the University of Arizona considers tolfenpyrad "Not as efficacious as Radiant® or Lannate® [against wester flower thrips], but significantly better than other alternatives."[7] In the United States western flower thrips have been shown to be capable developing resistance to methomyl[8,9] (Lannate) and the spinosyn class of insecticides[10] (Radiant). In Arizona repeated sprays are needed every 10-21 days to effectively manage thrips[11]. As a result growers need to have multiple effective products to help prevent western flower thrips from developing resistance to Lannate and Radiant.

  Tolfenpyrad also provides a unique mode of action[2] (FRAC Group 39) to be used in a fungicide rotational program[12] to help control powdery mildew in leafy vegetables.

4.2 Crop Group 8-10: Fruiting Vegetable Group

- Tolfenpyrad Technical was granted US registration on July 28, 2010 and an emergency exemption was granted under FIFRA Section 18 for use in Florida on the Fruiting Vegetable Group on February 29, 2016. Time-limited tolerances were established for the fruiting vegetable group on October 5, 2016, with an expiration date of December 31, 2019.

- The Section 18 in Florida for use on fruiting vegetables prohibits Nichino America from marketing Torac until a FIFRA Section 3 label is granted. The Florida Fruit and Vegetable Association notified its members when the Section 18 was granted.

- Acres grown according to 2012 US Census of Agriculture:
  - Eggplant 5,004
  - Pepper, bell 49,762
  - Pepper, nonbell 31,854

- Tolfenpyrad is highly effective at controlling western flower thrips in fruiting vegetables. While many new insecticides recently introduced to the market claim to control western flower thrips on their label, tolfenpyrad has proven to be more efficacious against this pest, and complements spinetoram as part of an effective western flower thrips spray rotation program[13].

- Criterion I: There are insufficient efficacious alternative registered pesticides available for the use.

  Tolfenpyrad was granted a Section 18 for thrips control in fruiting vegetables in the State of Florida on February 29, 2016. The justification posted on the Federal Register stated: "The Florida Department of Agriculture and Consumer Services (FDACS) requested an emergency exemption for the use of tolfenpyrad on fruiting vegetables to reduce damage

incurred by thrips. Thrips have become a severe problem in Florida on account of their developing resistance to the insecticides currently registered for use on fruiting vegetable crops, combined with the appearance of Tomato Chlorotic Spot Virus, a newly established invasive virus disease vectored by thrips attacking fruiting vegetables. According to FDACS, substantial economic damage is occurring and 30% to 90% yield loss has been documented due to the insufficient efficacy of registered alternatives."[14]

The University of Florida notes that certain insecticides, especially pyrethroids, enhance western flower thrips and melon thrips by killing minute pirate bugs and competitor thrips. They do not recommend the use of pyrethroids on pepper and eggplant, and advise avoiding pyrethroid use on tomato.[15] They also warn that many insecticides have a generic label for thrips, but do not control western flower thrips or melon thrips.

- Criterion III: The minor use pesticide plays or will play a significant part in managing pest resistance.

  Universities recommend rotating insecticide mode of actions to avoid promoting resistance. Fruiting vegetable growers are in need of additional tools to help manage thrips and resistance. Tolfenpyrad is the only active IRAC Group 21A insecticide registered for use against thrips in fruiting vegetables.[16] As such it provides a valuable tool for controlling thrips in fruiting vegetables.

4.3 Crop Group 10-10: Citrus Fruit Group

- Tolfenpyrad Technical was granted US registration on July 28, 2010 and the registration for use on the Citrus Crops on received on December 23, 2013.

- Nichino America is currently marketing Apta and Bexar on citrus crops to growers by use of informational technical sheets, advertisements in grower magazines, and sales calls to distributors, consultants and growers. On-farm demonstrations and launch meeting were conducted to educate growers on the benefits of using tolfenpyrad against citrus pests. Tolfenpyrad is pending registration in California.

- Acres grown according to 2012 US Census of Agriculture:
  - Grapefruit 88,393
  - Kumquat 136
  - Lemon 62,324
  - Lime 820
  - Tangelo 8,548
  - Tangerine 42,289

- Tolfenpyrad is a broad spectrum insecticide/miticide active against many economically important pests in citrus including Asian citrus psyllids, citrus thrips, citricola scale, barnacle scale, mealybugs, and citrus rust mites. In addition to the broad host range, tolfenpyrad is effective against all life stages of these pests. This allows growers to

effectively control the citrus pests any time of year these pests are present. In addition, its rapid action against citrus psyllid will suppress transmission of citrus greening in citrus.

- Criterion III: The minor use pesticide plays or will play a significant part in managing pest resistance.

  Tolfenpyrad is the only active IRAC Group 21A insecticide registered for use against citrus thrips[17], aphids[18], and soft scales[19], in citrus. Studies conducted in 2013-14 by Haviland and Rill found resistance in populations of citrus thrips to spinetoram, spinosad and pyrethroids in blueberry.[20] Researchers believe that these resistant populations are migrating to citrus orchards as it is common for blueberries and citrus crops to be grown side by side. Tolfenpyrad's new mode of action provides citrus growers an additional tool to help prevent the further development of resistance to other commonly used thrips products.

4.4 Crop Group 12-12: Stone Fruit Group

- Tolfenpyrad Technical was granted US registration on July 28, 2010 and the registration for use on the Stone Fruit Group on received on December 23, 2013.

- Nichino America is currently marketing Apta and Bexar on stone fruit crops to growers by use of informational sales sheets, and sales calls to distributors and growers. University demonstrations were conducted to demonstrate the effectiveness of tolfenpyrad against cherry pests. Tolfenpyrad is pending registration in California.

- Acres grown according to 2012 US Census of Agriculture:
  - Cherries (Tart) 49,784
  - Cherries (Sweet) 105,244

- Tolfenpyrad provides effective control of plum curculio at shuck-split timing and is an ideal rotational chemistry with the most commonly used insect control programs that include neonicotinoids, organophosphates, and pyrethroids. It also provides additional broad spectrum control of leafroller, aphids, cherry fruit fly, and suppression of spotted wing drosophila.

- Criterion III: The minor use pesticide plays or will play a significant part in managing pest resistance.

  Tolfenpyrad is the only active IRAC Group 21A insecticide registered for use against cherry fruit fly, spotted wing drosophila (suppression), apple maggot, katydid, aphids, leafrollers, and plum curculio[21]. Use of tolfenpyrad against these cherry pests will provide a valuable rotation tool to help prevent these pests developing resistance to existing products.

Section 5. Conclusion

Tolfenpyrad is a broad spectrum insecticide effective against a wide range of pests that are of economic importance in minor use crops. The METI mode of action of tolfenpyrad differs from most commercially available insecticides and fungicides, which makes it an excellent fit for resistant management programs on minor use crops.

For IPM strategies to be effective, a critical number of pesticides with different modes of action are needed in order to reduce the development of resistance. Tolfenpyrad provides a resistance management tool to extend the life of other commercially available insecticides registered for use in minor use crops.

Supported by the information and references cited within this document, Nichino America contends that tolfenpyrad registrations for 16 minor crops satisfy criteria I and/or III for granting the three-year extension of exclusive use data protection as provided under FIFRA Section 3(c) (1) (F) (ii).

Section 6. References

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Section 7. EPA-Approved Master Labels

7.1 Tolfenpyrad Technical Label

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Ms. Marie A. Maks
Nichino America Inc.
4550 New Linden Hill Road
Suite 501
Wilmington, DE 19808

MAR - 4 2014

Subject: Label Amendment – Addition of Mandatory "Directions for Use" Statement
Product Name: Tolfenpyrad Technical
EPA Registration Number: 71711-30
Submission Date: February 24, 2014
Decision Number: 488180

Dear Ms. Maks:

The label amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is **acceptable.**

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Products released for shipment after 18 months from the date on this notice or the next printing of the master label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Amended labeling will supersede all previously accepted labels. Your release for shipment of this product constitutes acceptance of these conditions. As required by 40 CFR 156.10(6), you must submit one copy of the final printed label before the product is released for shipment.

If you have any questions please contact Carlyn Petrella by phone at (703) 347-0439 or via email at "petrella.carlyn@epa.gov".

SEE NEXT PAGE

Sincerely,

Michael Walsh
Acting Product Manager (13)
Insecticide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

NICHINO AMERICA

ACCEPTED
MAR 0 4 2014
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71711-30

Tolfenpyrad Technical

For Formulating Use Only

ACTIVE INGREDIENT:

Tolfenpyrad (4-chloro-3-ethyl-1-methyl-*N*-[4-(*p*-tolyloxy)benzyl]pyrazole-5-carboxamide)..... 99.50%
OTHER INGREDIENTS 0.50%
TOTAL 100.00%

EPA Reg. No. 71711-30
EPA Est. No.

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	
If swallowed	• Call poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-348-5832 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

Net Contents: _____

Active Ingredient Made in Japan
Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808
888-740-7700

D-193 021314
Page 1 of 3

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING-AVISO

May be fatal if swallowed. Harmful if absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing before reuse. Wear long-sleeved shirt and long pants, socks, shoes, and gloves.

Environmental Hazards
Do not discharge effluent containing this product directly into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the Environmental Protection Agency.

Physical and Chemical Hazards
Do not expose contents to sunlight. Do not store contents in metal containers. Do not store contents at high temperatures (>120°F).

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

Only for formulation into an insecticide:

(1) For the following uses:
- Cotton (in AZ, CA and NM)
- Fruit, citrus, group 10-10
- Fruit, stone, group 12-12
- Grape (in CA, OR and WA)
- Nut, tree, group 14-12
- Persimmon
- Pomegranates
- Potatoes (West of the Mississippi)
- Vegetable, leafy, group 4, except brassica vegetable

(2) Ornamental plants (greenhouse)
(3) Uses for which USEPA has accepted the required data and/or citations of data that the formulator has submitted in support of registration;
(4) Uses for experimental purposes that are in compliance with USEPA requirements.

Formulation Information
Each formulator is responsible for obtaining EPA registration for his/her own end-use products. Technical information on formulations of this product as well as its physical and chemical characteristics may be obtained from Nichino America, Inc. It is a violation of Federal Law to use this product in a manner which is inconsistent with its labeling.

STORAGE AND DISPOSAL

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

STORAGE: Store in original container and keep closed. Store in a cool, dry place.

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

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into formulation equipment. Then offer for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke. If drum is contaminated and cannot be reused, dispose of in the same manner.

IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability, or otherwise.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT.

7.2 Tolfenpyrad 15EC Insecticide Label

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

APR 17 2014

Ms. Marie Maks
Senior Manager
Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808

Subject: Notification – Revising Pesticide Storage Text in the Storage and Disposal Box and Removing the Alternate Brand Name "Rycar Insecticide"
EPA Registration Number: 71711-31
Product Name: Tolfenpyrad 15EC Insecticide
Submission Date: April 16, 2014
Decision Number: 490045

Dear Ms. Maks:

The Agency is in receipt of your Application for Pesticide Notification dated April 16, 2014. The Registration Division has conducted a review of this request for its applicability under Pesticide Registration Notices (PRNs) 83-3 and 98-10. The Registration Division finds that the request does fall within the scope of PRNs 83-3 and 98-10.

Please note that PRNs are provided as guidance and that they are not considered regulation by the Agency, and that the RD reserves the right to make the determination of acceptability. **The Registration Division has determined that this action is acceptable**, and our records have been updated accordingly.

If you have any questions, please contact Michael Walsh at 703-308-2972 or via email at "walsh.michael@ epa.gov".

Sincerely,

Mark Suarez
Acting Product Manager (13)
Insecticide Branch
Registration Division (7505P)
Office of Pesticide Programs

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Ms. Marie Maks
Senior Manager
Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808

APR 17 2014

Subject: Notification – Revising Pesticide Storage Text in the Storage and Disposal Box and Removing the Alternate Brand Name "Rycar Insecticide"
EPA Registration Number: 71711-36
Product Name: Tolfenpyrad 15SC Insecticide
Submission Date: April 16, 2014
Decision Number: 490046

Dear Ms. Maks:

The Agency is in receipt of your Application for Pesticide Notification dated April 16, 2014. The Registration Division has conducted a review of this request for its applicability under Pesticide Registration Notices (PRNs) 83-3 and 98-10, and finds that the request does fall within the scope of the PRNs.

Please note that PRNs are provided as guidance and that they are not considered regulation by the Agency, and that the RD reserves the right to make the determination of acceptability. **The Registration Division has determined that this action is acceptable**, and our records have been updated accordingly.

If you have any questions, please contact Michael Walsh at 703-308-2972 or via email at "walsh.michael@ epa.gov".

Sincerely,

Mark Suarez
Acting Product Manager (13)
Insecticide Branch
Registration Division (7505P)
Office of Pesticide Programs

GROUP	21A	INSECTICIDE

NICHINO AMERICA

TOLFENPYRAD 15EC Insecticide

Active Ingredient:
Tolfenpyrad
(4-chloro-3-ethyl-1-methyl-*N*-[4-(*p*-tolyloxy)benzyl]pyrazole-5-carboxamide) **15.0%**
Other Ingredients*: **85.0%**
Total **100.0%**

Contains 1.29 lbs active ingredient per U.S. gallon
*Contains petroleum distillates

EPA Reg. No. 71711-31 **EPA Est. No. _____**

[Alternate brand name: Hachi-Hachi® Insecticide, ~~Rycar™ Insecticide,~~ Torac™ Insecticide]

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	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
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 treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-348-5832 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	
NOTE TO PHYSICIAN: There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.	

Net Contents:_____

NICHINO AMERICA, INC.
4550 New Linden Hill Road
Wilmington, DE 19808
888-740-7700

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
WARNING - AVISO

May be fatal if swallowed. Causes skin irritation. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing spray mist. Do not get in eyes, on skin or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of material such as barrier laminate or Viton
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles, face-shield or safety glasses)
- When mixing and loading wear a chemical-resistant apron

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations
Users should:

- Wash thoroughly with soap and water after handling and 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.
- Discard clothing and personal protective equipment that cannot be reused, including clothing and other absorbent materials that have been drenched or thoroughly contaminated with this product's concentrate.
- Wash clothing and personal protective equipment (including both the inside and outside of gloves) before each day of reuse according to manufacturer's directions or, if no such directions, in 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.

ENVIRONMENTAL HAZARDS
This pesticide is very highly toxic to fish and aquatic invertebrates.

For terrestrial uses, 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 apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to

treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees and other pollinating insects 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 or other pollinating insects are visiting the treatment area. Application must be made at least 8 hours prior to bees foraging.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having medium to high potential for reaching both surface water and aquatic sediment via runoff for several weeks after application. A level, well-maintained vegetative filter (buffer) strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

ENDANGERED SPECIES RESTRICTIONS
This product may pose a hazard to endangered aquatic species. Follow all use directions.

PHYSICAL OR CHEMICAL HAZARDS
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 in your state responsible for pesticide regulation.

1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met. If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

2. FOR FOOD CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55˚F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

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 made of material such as barrier laminate or Viton
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles, face-shield or safety glasses)

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow people (or pets) to enter the treated areas until sprays have dried.

USE INFORMATION

TOLFENPYRAD 15EC insecticide is formulated as an emulsifiable concentrate containing 1.29 lbs of active ingredient tolfenpyrad per gallon. This product is a contact insecticide used for the control of several orders of insects. Complete and thorough spray coverage is necessary for maximum results. TOLFENPYRAD 15EC insecticide should be used in a program with other products to provide season-long protection. Apply as a spray as directed in the "Application Directions" section of this label.

Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Adjust water volumes and tractor speed accordingly for crops with dense foliage or excessive growth. Unless otherwise specified under Application Directions, apply when pest populations are beginning to build, before crop damage or injury is observed. Consult your local agricultural advisor or state cooperative extension service for recommendations.

DIRECTIONS FOR USE OF TOLFENPYRAD 15EC INSECTICIDE AS A FUNGICIDE

For crops and diseases where the level of activity of Tolfenpyrad 15EC insecticide is listed as "control," this product may be used alone as a contact fungicide or mixed with other registered fungicide products to broaden spectrum of disease control. For crops and diseases where the level of activity of Tolfenpyrad 15EC insecticide is listed as "suppression" this product should NOT be substituted for labeled fungicidal products.

APPLICATION DIRECTIONS

- Applications should be made immediately after the spray solution is prepared.
- Thorough spray coverage is critical to obtain control of the target pest(s).
- Applications may be made by air or ground with high or low volume spray equipment that provides thorough spray coverage of the plant.
- For ground applications, use coarse droplet size
- For aerial applications, use larger droplet size (greater than 200 microns).
- Use sufficient water volume to ensure thorough coverage of foliage.
- Do not apply TOLFENPYRAD 15EC insecticide through any type of irrigation system except those described in the CHEMIGATION section.
- **RESTRICTION:** Not for sale or use in the state of New York.

BUFFER ZONES

Vegetative Filter (Buffer) Strip
All crops except tree nut (crop group 14-12): 15 foot vegetative filter (buffer) strip
Tree nut (crop group 14-12): 25 foot vegetative filter (buffer) strip

Construct and maintain the vegetative filter (buffer) strip of grass or other permanent vegetation between 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 products containing tolfenpyrad onto fields where a maintained vegetative filter (buffer) strip of at least 15 feet exists between the field edge 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, http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

Buffer Zone for Ground Application
Do not apply within 15 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Aerial Application
Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

CHEMIGATION

For chemigation use in potato and vegetable crops only. TOLFENPYRAD 15EC insecticide may be applied only through overhead center pivot, solid set, hand move and moving wheel irrigation equipment.

Center Pivot Irrigation Equipment:
Notes: (1) Use only drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating TOLFENPYRAD 15EC insecticide to avoid non-uniform application. (3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply ¼ - ½ inch of water over the area to be treated when the system and injection system area operate at normal pressures as recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of TOLFENPYRAD 15EC insecticide and any tankmix partners required to treat the area covered by the irrigation system.
5. Add to the solution tank the required amount of TOLFENPYRAD 15EC insecticide and tankmix partners, and sufficient water to meet the injection time requirements.
6. Make sure the system is fully charged with water before starting injection of the TOLFENPYRAD 15EC insecticide solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of TOLFENPYRAD 15EC insecticide per acre continuously for one complete revolution of the system.

9. Stop the injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15EC insecticide solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the TOLFENPYRAD 15EC insecticide solution through all nozzles before turning off irrigation water.

Solid Set, Hand Move and Moving Wheel Irrigation Equipment:

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of TOLFENPYRAD 15EC insecticide required to treat the area covered by the irrigation system.
4. Add the required amount of TOLFENPYRAD 15EC insecticide and any other tankmix partners into the same quantity of water used to calibrate the injection period.
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of TOLFENPYRAD 15EC insecticide per acre for: (1) a 20-40 minute period at the end of a regular irrigation set; or (2) as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide on the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15EC insecticide solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Chemigation Monitoring: A person knowledgeable of the chemigation system and equipment responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Follow the appropriate personal protective equipment (PPE) guidelines.

SPRAY ADJUVANTS

For maximum performance, the use of an agricultural spray adjuvant with Tolfenpyrad 15EC insecticide is recommended to increase spray coverage of the plants and pests being treated. Select an adjuvant that is labeled for agricultural use and follow its use directions.

CROP ROTATION RESTRICTIONS:

CROP/CROP GROUP	PLANTBACK TIMING
All crops on this label	0 days following application
All other crops	14 days following application

FOR DIRECT-SEEDED AND TRANSPLANTED LEAFY VEGETABLES (Crop Group 4)

Do not apply Tolfenpyrad 15EC insecticide until at least fourteen (14) days after emergence or after transplanting to allow time for root establishment. This period of time should be extended if conditions at time of emergence or transplanting are not favorable to crop growth.

USE LIMITATIONS AND PRECAUTIONS FOR GREENHOUSE ORNAMENTAL CROPS

- Do not apply this product as a smoke or aerosol.
- Do not apply to *Salvia* spp., *Impatiens* spp., *Gypsophila* spp. and New Guinea impatiens due to potential crop injury.
- Do not apply to Poinsettias with bracts with color.
- In Florida, do not use on bearing or nonbearing commercial fruit trees and vines.
- Do not use this product through any type of irrigation system.

RESISTANCE MANAGEMENT

Tolfenpyrad 15EC insecticide contains the active ingredient tolfenpyrad, an IRAC Group 21A insecticide. Use of the same mode of action repeatedly in the same field or area may result in reduced control and/or insect resistance. Unless targeting a single generation of a pest, Tolfenpyrad 15EC insecticide applications should be alternated with other insecticidal modes of action. If targeting a single generation of a pest, do not apply more than two consecutive applications of Tolfenpyrad 15EC insecticide before rotating to an insecticide with a different mode of action.

Resistance management strategies recommend that you DO NOT apply rates lower than recommended on the label. Contact your local extension specialist or certified crop adviser for additional Insecticide Resistance Management (IRM) or IPM recommendations. For more information about IRM visit the Insecticide Resistance Action Committee (IRAC) website at http://www.irac-online.org.

MIXING DIRECTIONS

Shake well before using. Read and follow all label directions for each tankmix product prior to any tank mixing with TOLFENPYRAD 15EC insecticide. This product can be mixed with other registered pesticides for use on labeled crops or sites, in accordance with the most restrictive use directions and precautions. No labeled dose rate should be exceeded.

TOLFENPYRAD 15EC insecticide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing TOLFENPYRAD 15EC insecticide with other pesticides, fertilizers or micronutrients. If you have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, add the recommended proportions of each chemical with the same proportion of water, as will be present in the chemical supply tank, into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be readily re-mixed, the mixture is considered physically compatible.

TOLFENPYRAD 15EC Insecticide Alone: Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the remaining water volume to the spray tank with agitation running. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load.

TOLFENPYRAD 15EC Insecticide Tank Mixtures: Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and turn on agitation.

If using a buffering agent, add after filling the tank with ¾ amount of water.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

1) products in water soluble packets
2) wettable powders
3) water dispersible granulars and/or soluble powders
4) flowable liquids
5) emulsifiable concentrates (including Tolfenpyrad 15EC insecticide)
6) adjuvants and/or oils
7) remaining amount of water to achieve the desired level

COMPATIBILITY STATEMENT REGARDING CERTAIN FUNGICIDE PRODUCTS

Tolfenpyrad 15EC insecticide has been found to be compatible in mixes with several different fungicide products and has been found to be safe to labeled crops under most conditions. However, care should be taken when applying Tolfenpyrad 15EC insecticide in tankmixes with fungicide products in FRAC Group 3 (sterol biosynthesis inhibitors) and FRAC Group 11 (QOL) if environmental conditions are known to be conducive to adverse crop response to those products.

SPRAY DRIFT MANAGEMENT

Avoid spray drift to all other crops and nontarget areas. Do not apply when weather conditions may cause drift. Do not allow this product to drift onto nontarget areas. Drift may result in illegal residues or injury to adjacent crops and vegetation. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet size will also reduce spray drift.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

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

Droplet size, boom height, and wind speed are the primary factors determining drift. The specific application conditions required for the use of this product are described below.

Controlling Droplet Size – General Techniques:

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. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.

Controlling Droplet Size – Aircraft:

Number of Nozzles

Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

Nozzle Orientation
Orienting nozzles so that the spray is 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 Height and Length – Ground and Aircraft:
Boom Height (ground): Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Boom Height (aircraft): Application more than 10 feet above the canopy increases the potential for spray drift.

Boom Length (aircraft): The minimum boom length should not exceed ¾ of the wing length; using shorter booms decreases drift potential. For helicopters, the minimum boom length should not exceed 9/10 of the rotary blade to prevent droplets from entering the rotor vortices.

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 wind speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. AVOID GUSTY OR WINDLESS CONDITIONS. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect 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 close to the ground and move laterally in a concentrated cloud. This cloud can move in unpredictable directions due to the light and 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 habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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

Air Assisted (Air Blast) Field Crop Sprayers
Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. **Note**: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

Air Assisted (Air Blast) Tree and Vine Sprayers
Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. In addition to the general drift management practices already described, the following specific practices will further reduce the potential for drift:

- Adjust the deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

INDOOR GREENHOUSE USE ON ORNAMENTAL CROPS
ORNAMENTAL PLANTS: Tolfenpyrad 15EC insecticide is recommended for use on ornamental plants. The use directions of this product are based on the results of product testing programs on a wide variety of ornamental plants. However, it is impossible to test this product on all species and cultivars. The phytotoxicity of **Tolfenpyrad 15EC** insecticide has been assessed on a wide variety of common ornamental plants with no phytotoxic effects. However, not all plant species and their varieties and cultivars have been tested with possible tankmix combinations, sequential pesticide treatments, and adjuvants and surfactants. Local conditions also can influence crop tolerance and may not match those under which testing has been conducted. Therefore, before using **Tolfenpyrad 15EC** insecticide, test the product on a sample of the crop to be treated to ensure that a phytotoxic response will not occur as a result of applications.

Tolfenpyrad 15EC insecticide works primarily through contact action, so good spray coverage is necessary for control of listed insects on the label. Applications should be made immediately after the spray solution is prepared. Under severe insect pressure, use the maximum rates and the shorter spray interval as specified on the label. Dense foliage or excessive growth will often prevent adequate coverage; adjust spray volumes accordingly. Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Treat plants when pests are immature or at a susceptible stage and populations are building, before crop damage occurs.

Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. A wetting agent or other spray adjuvant, approved for use on the crop, may be added to spray solutions according to the manufacturer's use instructions to achieve optimum control.

Tolfenpyrad 15EC insecticide has been tested on a wide variety of common finished greenhouse crops (listed below). For greenhouse crops not listed below and all young herbaceous crops, such as bedding plant plugs, the user should test the tolerance of Tolfenpyrad 15EC insecticide on a small area under their local conditions and observe treated crops for 4 to 7 days prior to broad scale use. Tolfenpyrad 15EC insecticide is recommended for use on ornamental plantings listed below.

List of Plant Species Tested for Tolerance to Tolfenpyrad 15EC Insecticide[1]

Common Name	Scientific Name
Arrowwood	*Viburnum spp.*
Ash	*Fraxinus spp.*
Cherry	*Prunus spp.*
Chrysanthemum	*Chrysanthemum spp.*
Coleus	*Solenostemon spp.*
Evening Primrose	*Oenothera spp.*
Gerbera (Transvaal Daisy)	*Gerbera spp.*
Gladiolus	*Gladiolus spp.*
Lantana (Yellow Sage)	*Lantana camera*
Marigold	*Tagetes spp.*
Moss Rose	*Portulaca spp.*
Petunia[2]	*Petunia spp.*
Poinsettia[3]	*Euphorbia pulcherrima*
Schefflera	*Brassaia actinophylla*
Yew	*Taxus media*

1. Local conditions can influence crop tolerance and may not match those under which these species were tested. Before using **Tolfenpyrad 15EC** insecticide, test the product on a small sample of the crop to be treated.
2. Direct sprays of **Tolfenpyrad 15EC** insecticide to blooms of some species of Petunia at higher use rates may cause phytotoxicity to existing blooms.
3. Do not apply to poinsettias if bracts with color.

Temporary phytotoxicity may occur to some species of *Ageratum*, *Colocasia*, *Geranium*, *Lobelia*, *Pansy (flowers)*, *Verbena*, and *Vinca*. Users should test the tolerance of Tolfenpyrad 15EC insecticide under their local conditions and observe these crops for 4 to 7 days prior to broad scale use.

DO NOT APPLY TOLFENPYRAD 15EC INSECTICIDE TO *SALVIA* SPP., *IMPATIENS* SPP., *GYPSOPHILA* SPP., AND NEW GUINEA IMPATIENS DUE TO POTENTIAL CROP INJURY.

APPLICATION RATE CHART FOR TOLFENPYRAD 15EC INSECTICIDE

CITRUS FRUIT GROUP (Crop Group 10-10)

Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin, orange, clementine); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

Pest	*Rate/Acre*	*Use Directions*
Asian citrus psyllid Katydid	14.0 – 27.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • For **ground applications,** do not use less than 100 gallons of water per acre. • For **high air velocity, low volume or air curtain sprayers**, do not use less than 30 gallons of water per acre. • Do not apply more than 27.0 fluid ounces per acre per growing season. • Do not make more than 1 application per growing season. • Do not make more than 2 applications per year. • Allow at least 14 days between applications. • Pre-harvest interval (PHI): 14 days • Do not use on nursery stock. ***USE RECOMMENDATIONS*** • Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s). • Apply when pest populations are beginning to build.
Aphids	17.0 – 27.0 fl oz/acre	
Soft scale insects, including Citricola scale, Barnacle scale, and Brown soft scale Citrus bud mite Citrus mealybug Citrus thrips	21.0 – 27.0 fl oz/acre	
Citrus peelminer Citrus rust mite (silver mite) Citrus red mite Leafminer Mealybugs Citrus orangedog (suppression) Citrus weevil (suppression) Cutworms (suppression)	24.0 – 27.0 fl oz/acre	

COTTON (Limited to the states of Arizona, California and New Mexico)		
Pest	***Rate/Acre***	***Use Directions***
Aphids	14.0 – 21.0 fl oz/acre	***USE RESTRICTIONS*** • For **ground applications**, do not use less than 10 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • Do not apply more than 42.0 fluid ounces per acre per growing season. • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Pre-harvest interval (PHI): 14 days ***USE RECOMMENDATIONS*** • Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s). • Apply when pest populations are beginning to build.
Fleahopper	17.0 – 21.0 fl oz/acre	
Thrips Armyworms (suppression) Bollworms (suppression) Pink bollworm (suppression) Plant bugs (suppression) Stink bugs (suppression) Tobacco budworm (suppression) Whiteflies (suppression)	21.0 fl oz/acre	

<table>
<tr><td colspan="3">GRAPES (Limited to the states of California, Oregon and Washington)

Raisin; Table; Wine</td></tr>
<tr><th>Pest/Disease</th><th>Rate/Acre</th><th>Use Directions</th></tr>
<tr><td>Leafhoppers</td><td>12.0 – 21.0 fl oz/acre</td><td rowspan="3">USE RESTRICTIONS
• Do not apply by air.
• For ground applications, do not use less than 50 gallons of water per acre.
• Do not apply more than 41.0 fluid ounces per acre per growing season.
• Do not make more than 2 applications per growing season.
• Allow at least 14 days between applications.
• Pre-harvest interval (PHI): 7 days

USE RECOMMENDATIONS
• Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s).
• Apply when pest populations are beginning to build.
• TOLFENPYRAD 15EC insecticide only provides contact efficacy against vine mealybug and should be tank mixed with another insecticide to add residual control.</td></tr>
<tr><td>Grape berry moth
Leaffolders
Leafrollers
Mealybugs
Thrips</td><td>21.0 – 27.0 fl oz/acre</td></tr>
<tr><td>Japanese beetle adults (topical application)

Grapeleaf skeletonizer (suppression)
Powdery mildew (suppression)</td><td>24.0 – 27.0 fl oz/acre</td></tr>
</table>

LEAFY VEGETABLES (EXCEPT BRASSICA VEGETABLES) (Crop Group 4)
Amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard

Pest/Disease	***Rate/Acre***	***Use Directions***
Leafhoppers	14.0 – 21.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air in TX or East of the Mississippi River.** • Do not apply Tolfenpyrad 15EC insecticide until at least fourteen (14) days after emergence or after transplanting to allow time for root establishment. This period of time should be extended if conditions at time of emergence or transplanting are not favorable to crop growth. • For **ground applications**, do not use less than 20 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • Do not apply more than 42.0 fluid ounces per acre per crop cycle. • Do not make more than 2 applications per crop cycle. • Do not make more than 4 applications per year. • Allow at least 14 days between applications. • Pre-harvest interval (PHI): 1 day ***USE RECOMMENDATIONS-PESTS*** • Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s). • Apply when pest populations are beginning to build.
Aphids (excluding lettuce aphid) Flea beetle	17.0 – 21.0 fl oz/acre	
Thrips Powdery mildew (*Erysiphe cichoracearum)* Armyworms (suppression) Corn earworm (suppression) Cutworm species (suppression) European corn borer (suppression) Imported cabbageworm (suppression) Tobacco budworm (suppression) Tomato hornworm (suppression) Whiteflies (suppression) Downy mildew (suppression)	21.0 fl oz/acre	

		USE RECOMMENDATIONS-DISEASES • Begin applications prior to onset of disease. • Use sufficient water volume to achieve thorough coverage. • Use of an agriculturally approved non-ionic surfactant at 0.25% v/v may improve disease control. • If weather conditions remain conducive to disease development, apply another registered fungicide product with a different mode of action 7-10 days later. • Consult local extension recommendations or your agricultural consultant for information specific to your area.

POTATOES (Limited to states west of the Mississippi River)		
Pest	***Rate/Acre***	***Use Directions***
Colorado potato beetle Leafhoppers	14.0 – 21.0 fl oz/acre	***USE RESTRICTIONS*** • **No aerial applications in TX** • For **ground applications**, do not use less than 20 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • See CHEMIGATION statement in Application Directions. • Do not apply more than 42.0 fluid ounces per acre per crop cycle. • Do not make more than 2 applications per crop cycle. • Allow at least 14 days between applications. • Pre-harvest interval (PHI): 14 days ***USE RECOMMENDATIONS*** • Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s). • Apply when pest populations are beginning to build.
Aphids Potato psyllid Thrips	17.0 – 21.0 fl oz/acre	

<table>
<tr><td colspan="3">STONE FRUITS (Crop Group 12-12), PERSIMMON, and POMEGRANATE
Apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; persimmon; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; pomegranate; sloe; cultivars, varieties, and/or hybrids of these</td></tr>
<tr><th>Pest/Disease</th><th>Rate/Acre</th><th>Use Directions</th></tr>
<tr><td>Cherry fruit fly
Leafhoppers
Katydid</td><td>14.0 – 27.0 fl oz/acre</td><td rowspan="3">USE RESTRICTIONS
• Do not apply by air.
• For ground applications, do not use less than 50 gallons of water per acre.
• Do not apply by Alternate Row Middle (ARM) spray method
• Do not apply more than 54.0 fluid ounces per acre per growing season.
• Do not make more than 2 applications per growing season.
• Allow at least 10 days between applications.
• Pre-harvest interval (PHI): 14 days

USE RECOMMENDATIONS
• Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s).
• Apply when pest populations are beginning to build.</td></tr>
<tr><td>Aphids</td><td>17.0 – 27.0 fl oz/acre</td></tr>
<tr><td>Apple maggot
Leafrollers
Mealybugs
Plum curculio

Green fruitworm (suppression)
Peach twig borer (suppression)
Spotted wing drosophila (suppression)
Stink bugs (suppression)
Thrips (suppression)
Powdery mildew (suppression)</td><td>21.0 – 27.0 fl oz/acre</td></tr>
</table>

TREE NUTS (Crop Group 14-12)

Africa nut-tree; Almond; beech nut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut(filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these

Pest	***Rate/Acre***	***Use Directions***
Aphids	17.0 – 27.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • **Maintain a minimum of 25 feet of vegetative filter (buffer) strip.** • For **ground applications**, do not use less than 50 gallons of water per acre. • Do not apply by Alternate Row Middle (ARM) spray method • Do not apply more than 27.0 fluid ounces per acre per growing season. • Do not make more than 1 application per growing season. • Allow at least 14 days between applications. • Pre-harvest interval (PHI): 14 days ***USE RECOMMENDATIONS*** • Use sufficient water volume to ensure thorough coverage of foliage. Thorough spray coverage is critical to obtain control of the target pest(s). • Apply when pest populations are beginning to build.
Hickory shuckworm Leafrollers Mealybugs Pecan nut casebearer Pecan weevil Navel orangeworm (suppression) Peach twig borer (suppression) Plant bugs (suppression) Stink bugs (suppression)	21.0 – 27.0 fl oz/acre	

APPLICATION RATE CHART FOR TOLFENPYRAD 15EC INSECTICIDE

ORNAMENTAL PLANTS In greenhouses		
Pest	***Dilution Rate FL OZ/100 Gallons***	***Use Directions***
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly (suppression) Powdery mildew (suppression)	21 – 32 fl oz per 100 gal	• The maximum single application rate is 1.36 lb ai/acre (139 fl oz/A) or 0.31 lb a.i. per 10,000 square feet. • Apply no more than 100 gallons of spray solution per 10,000 sq. ft. per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse. • Apply no more than 2 applications per crop cycle. • Apply no more than 64 fluid ounces per 10,000 square feet. • Allow at least 10 days between applications. • Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Spray to the point of runoff. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.

GREENHOUSE ORNAMENTAL PLANTS Greenhouse ornamental plants grown for cuttings (e.g. cut flowers)		
Pest	***Dilution Rate FL OZ/100 Gallons***	***Use Directions***
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly (suppression) Powdery mildew (suppression)	14 – 32 fl oz per 100 gal	• The maximum single application rate is 0.96 lb a.i./acre (98 fl oz/A) or 0.22 lb a.i. per 10,000 square feet. • Apply no more than 100 gallons of spray solution per 10,000 square feet per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet. • Apply no more than 2 applications per crop cycle. • Do not apply more than 4 applications per year. • Do not apply more than 44 fluid ounces per crop cycle per 10,000 square feet. • Allow at least 10 days between applications. • Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, and keep tightly closed when not in use. Store ~~unopened~~ in a cool, dry place.

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

CONTAINER HANDLING:

Nonrefillable plastic container (Less than 5 gallons)

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining content 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 if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable plastic container (Greater than 5 gallons or 50 pounds)

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple Rinse as follows: Empty 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 if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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 a 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.

Refillable plastic 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 disposal, empty the remaining contents from this container into application equipment or a 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. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability or otherwise.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT.

Hachi-Hachi®~~, Rycar™,~~ and Torac™ are trademarks of Nichino America, Inc.

Formulated and Packaged in U.S.A. for:
NICHINO AMERICA, INC.
4550 New Linden Hill Road
Wilmington, DE 19808
888-740-7700

~~110911~~
~~121713~~

7.3 Tolfenpyrad 15SC Insecticide Label

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 16, 2014

Dr. Lydia Cox
Director of Regulatory Affairs
Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808

Subject: Label Amendment – Revising Chemical Name as Listed in CAS, Revising Use Rate Text, Revising Container Handling Text, and Making Numerous Other Changes
Product Name: Tolfenpyrad 15 SC Insecticide
EPA Registration Number: 71711-36
Application Date: April 25, 2014
Decision Number: 490748

Dear Dr. Cox:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

SEE NEXT PAGE

Fast Track Label Acceptable v.20141114

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

with FIFRA section 6. If you have any questions, please contact Michael Walsh by phone at (703) 308-2972, or via email at "walsh.michael@epa.gov".

Sincerely,

Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
Office of Pesticide Programs

Enclosure

GROUP	21A	INSECTICIDE

NICHINO AMERICA

ACCEPTED
12/16/2014
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71711-36

TOLFENPYRAD 15SC Insecticide

ACTIVE INGREDIENT:

Tolfenpyrad 1H-Pyrazole-5-carboxamide, 4-chloro-3-ethyl-1-methyl-N-[[4-(4-methylphenoxy)phenyl]methyl]-	**15.0%**
OTHER INGREDIENTS:	**85.0%**
TOTAL	**100.0%**

Contains 1.31 lbs active ingredient per U.S. gallon

EPA Reg. No. 71711-36 **EPA Est. No. _____**

[Alternate brand name: Hachi-Hachi® SC Insecticide, Bexar™ Insecticide, Apta™ Insecticide]

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	
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 treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-348-5832 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

Net Contents:_____

NICHINO AMERICA, INC.
4550 New Linden Hill Road
Wilmington, DE 19808
888-740-7700

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING - AVISO

May be fatal if inhaled. Do not breathe vapor or spray mist. Harmful if swallowed or if absorbed through skin. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield or safety glasses)
- For handling activities, use dust/mist filtering respirator with an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations
Users should:

- Wash thoroughly with soap and water after handling and 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.
- Discard clothing and personal protective equipment that cannot be reused, including clothing and other absorbent materials that have been drenched or thoroughly contaminated with this product's concentrate.
- Wash clothing and personal protective equipment (including both the inside and outside of gloves) before each day of reuse according to manufacturer's directions or, if no such directions, in 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.

ENVIRONMENTAL HAZARDS
This pesticide is very highly toxic to fish and aquatic invertebrates.

For terrestrial uses, 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 apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees and other pollinating insects 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 or other pollinating insects are visiting the treatment area. Application must be made at least 8 hours prior to bees foraging.

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having medium to high potential for reaching both surface water and aquatic sediment via runoff for several weeks after application. A level, well-maintained vegetative filter (buffer) strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.
This product can kill bees and other insect pollinators.
Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:
- Direct contact during foliar applications or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this product, take steps to:
- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product onto beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.
Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

ENDANGERED SPECIES RESTRICTIONS
This product may pose a hazard to endangered aquatic species. Follow all use directions.

PHYSICAL OR CHEMICAL HAZARDS
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 in your state responsible for pesticide regulation.

1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES
Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met. If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.

2. FOR FOOD CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS
Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset.
- The application is made to the target site when temperatures are below 55˚F.
- The application is made in accordance with a government-initiated public health response.
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.

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 over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles, face shield or safety glasses)

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, and greenhouses. Keep people out of treated areas without protective clothing until sprays have dried.

USE INFORMATION

TOLFENPYRAD 15SC insecticide is a suspension concentrate containing 1.31 lbs of active ingredient tolfenpyrad per gallon. This product is a contact insecticide used for the control of several orders of insects. Complete and thorough spray coverage is necessary for maximum results. TOLFENPYRAD 15SC insecticide should be used in a program with other products to provide season long protection. Apply as a spray as directed in the **Application Directions** section of this label.

Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Adjust water volumes and tractor speed accordingly for crops with dense foliage or excessive growth. Unless otherwise specified under Application Directions, apply when pest populations are beginning to build, before crop damage or injury is observed. Consult your local agricultural advisor or state cooperative extension service for recommendations.

DIRECTIONS FOR USE OF TOLFENPYRAD 15SC INSECTICIDE AS A FUNGICIDE

For crops and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as "control", this product may be used alone as a contact fungicide or mixed with other registered fungicide products to broaden spectrum of disease control. For crops and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as "suppression", this product should NOT be substituted for labeled fungicidal products.

APPLICATION DIRECTIONS

- Applications should be made immediately after the spray solution is prepared.
- Thorough spray coverage is critical to obtain control of the target pest(s).
- Applications may be made by air or ground with high or low volume spray equipment that provides thorough spray coverage of the plant.
- For ground applications, use coarse droplet size.

- For aerial applications, use larger droplet size (greater than 200 microns).
- Use sufficient water volume to ensure thorough coverage of foliage.
- Do not apply TOLFENPYRAD 15SC insecticide through any type of irrigation system except those described in the CHEMIGATION section.
- **RESTRICTION:** Not for sale or use in the state of New York.

BUFFER ZONES

Vegetative Filter (Buffer) Strip
All crops except Tree Nuts (crop group 14-12): 15-foot vegetative filter (buffer) strip
Tree Nuts (crop group 14-12): 25-foot vegetative filter (buffer) strip

Construct and maintain the vegetative filter (buffer) strip of grass or other permanent vegetation between 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 products containing tolfenpyrad onto fields where a maintained vegetative filter (buffer) strip of at least 15 feet exists between the field edge 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, http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

Buffer Zone for Ground Application
Do not apply within 15 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Aerial Application
Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

CHEMIGATION

For chemigation use in potato and vegetable crops only. TOLFENPYRAD 15SC insecticide may be applied only through overhead center pivot, solid set, hand move and moving wheel irrigation equipment.

Center Pivot Irrigation Equipment:
Notes: (1) Use only drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating TOLFENPYRAD 15SC insecticide to avoid non-uniform application. (3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply ¼ - ½ inch of water over the area to be treated when the system and injection system area operate at normal pressures as recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of TOLFENPYRAD 15SC insecticide and any tankmix partners required to treat the area covered by the irrigation system.
5. Add to the solution tank the required amount of TOLFENPYRAD 15SC insecticide and tankmix partners, and sufficient water to meet the injection time requirements.

6. Make sure the system is fully charged with water before starting injection of the TOLFENPYRAD 15SC insecticide solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of TOLFENPYRAD 15SC insecticide per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15SC insecticide solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the TOLFENPYRAD 15SC insecticide solution through all nozzles before turning off irrigation water.

Solid Set, Hand Move and Moving Wheel Irrigation Equipment:

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of TOLFENPYRAD 15SC insecticide required to treat the area covered by the irrigation system.
4. Add the required amount of TOLFENPYRAD 15SC insecticide and any other tankmix partners into the same quantity of water used to calibrate the injection period.
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of TOLFENPYRAD 15SC insecticide per acre for: (1) a 20-40 minute period at the end of a regular irrigation set; or (2) as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide on the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15SC insecticide solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Chemigation Monitoring: A person knowledgeable of the chemigation system and equipment responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Follow the appropriate personal protective equipment (PPE) guidelines.

SPRAY ADJUVANTS

For maximum performance, the use of an agricultural spray adjuvant with TOLFENPYRAD 15SC insecticide is recommended to increase spray coverage of the plants and pests being treated. Select an adjuvant that is labeled for agricultural use and follow its use directions.

CROP ROTATION RESTRICTIONS

CROP/CROP GROUP	PLANTBACK TIMING
All crops on this label	0 days following application
All other crops	14 days following application

FOR DIRECT-SEEDED AND TRANSPLANTED LEAFY VEGETABLES (Crop Group 4)

Do not apply Tolfenpyrad 15SC insecticide until at least fourteen (14) days after emergence or after transplanting to allow time for root establishment. This period of time should be extended if conditions at time of emergence or transplanting are not favorable to crop growth.

USE LIMITATIONS AND PRECAUTIONS FOR GREENHOUSE ORNAMENTAL CROPS

- Do not apply this product as a smoke or aerosol.
- Do not apply to *Salvia* spp., *Impatiens* spp., *Gypsophila* spp. and New Guinea impatiens due to potential crop injury.
- Do not apply to Poinsettias with bracts with color.
- In Florida, do not use on bearing or nonbearing commercial fruit trees and vines.
- Do not use this product through any type of irrigation system.

RESISTANCE MANAGEMENT

Tolfenpyrad 15SC insecticide contains the active ingredient tolfenpyrad, an IRAC Group 21A insecticide. Use of the same mode of action repeatedly in the same field or area may result in reduced control and/or insect resistance. Unless targeting a single generation of a pest, Tolfenpyrad 15SC insecticide applications should be alternated with other insecticidal modes of action. If targeting a single generation of a pest, do not apply more than two consecutive applications of Tolfenpyrad 15SC insecticide before rotating to an insecticide with a different mode of action.

Resistance management strategies recommend that you DO NOT apply rates lower than recommended on the label. Contact your local extension specialist or certified crop adviser for additional Insecticide Resistance Management (IRM) or IPM recommendations. For more information about IRM, visit the Insecticide Resistance Action Committee (IRAC) website at http://www.irac-online.org.

MIXING DIRECTIONS

Shake well before using. Read and follow all label directions for each tank mix product prior to any tank mixing with TOLFENPYRAD 15SC insecticide. This product can be mixed with other registered pesticides for use on labeled crops or sites, in accordance with the most restrictive use directions and precautions. No labeled dose rate should be exceeded.

TOLFENPYRAD 15SC insecticide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing TOLFENPYRAD 15SC insecticide with other pesticides, fertilizers, or micronutrients. If you have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, add the recommended proportions of each chemical with the same proportion of water, as will be present in the chemical supply tank, into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be readily remixed, the mixture is considered physically compatible.

TOLFENPYRAD 15SC Insecticide Alone: Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the remaining water volume to the spray tank with agitation running. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load.

TOLFENPYRAD 15SC Insecticide Tank Mixtures: Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and turn on agitation.

If using a buffering agent, add after filling the tank with ¾ amount of water.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

1) products in water soluble packets
2) wettable powders
3) water dispersible granulars and/or soluble powders
4) flowable liquids (including TOLFENPYRAD 15SC insecticide)
5) emulsifiable concentrate
6) adjuvants and/or oils
7) remaining amount of water to achieve the desired level

COMPATIBILITY STATEMENT REGARDING CERTAIN FUNGICIDE PRODUCTS

Tolfenpyrad 15SC insecticide has been found to be compatible in mixes with several different fungicide products and has been found to be safe to labeled crops under most conditions. However, care should be taken when applying Tolfenpyrad 15SC insecticide in tankmixes with fungicide products in FRAC Group 3 (sterol biosynthesis inhibitors) and FRAC Group 11 (QoI) if environmental conditions are known to be conducive to adverse crop response to those products.

SPRAY DRIFT MANAGEMENT

Avoid spray drift to all other crops and nontarget areas. Do not apply when weather conditions may cause drift. Do not allow this product to drift onto nontarget areas. Drift may result in illegal residues or injury to adjacent crops and vegetation. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet size will also reduce spray drift.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

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

Droplet size, boom height, and wind speed are the primary factors determining drift. The specific application conditions required for the use of this product are described below.

Controlling Droplet Size – General Techniques

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. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.

Controlling Droplet Size – Aircraft
Number of Nozzles
Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

Nozzle Orientation
Orienting nozzles so that the spray is 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 Height and Length – Ground and Aircraft

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

Boom Height (aircraft): Application more than 10 feet above the canopy increases the potential for spray drift.

Boom Length (aircraft): The minimum boom length should not exceed ¾ of the wing length; using shorter booms decreases drift potential. For helicopters, the minimum boom length should not exceed 9/10 of the rotary blade to prevent droplets from entering the rotor vortices.

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 wind speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. AVOID GUSTY OR WINDLESS CONDITIONS. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect 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 close to the ground and move laterally in a concentrated cloud. This cloud can move in unpredictable directions due to the light and 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 habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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

Air Assisted (Air Blast) Field Crop Sprayers
Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. **Note**: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

Air Assisted (Air Blast) Tree and Vine Sprayers
Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. In addition to the general drift management practices already described, the following specific practices will further reduce the potential for drift:

- Adjust the deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

INDOOR GREENHOUSE USE ON ORNAMENTAL CROPS
ORNAMENTAL PLANTS: Tolfenpyrad 15SC insecticide is recommended for use on ornamental plants. The use directions of this product are based on the results of product testing programs on a wide variety of ornamental plants. The phytotoxicity of **Tolfenpyrad 15SC** insecticide has been assessed on a wide variety of common ornamental plants. However, not all plant species, varieties, and cultivars have been tested, including with possible tankmix combinations, sequential pesticide treatments, and adjuvants and surfactants. Local conditions also can influence crop tolerance and may not match those under which testing has been conducted. **Therefore, before using Tolfenpyrad 15SC insecticide for commercial applications, the user must test the product and its representative use on a sample of the crop to be treated to ensure that a phytotoxic response will not occur as a result of applications.**

Tolfenpyrad 15SC insecticide works primarily through contact action, so good spray coverage is necessary for control of listed insects on the label. Applications should be made immediately after the spray solution is prepared. Under severe insect pressure, use the maximum rates and the shorter spray interval as specified on the label. Dense foliage or excessive growth will often prevent adequate coverage; adjust spray volumes accordingly. Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Treat plants when pests are immature or at a susceptible stage and populations are building, before crop damage occurs.

Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. A wetting agent or other spray adjuvant, approved for use on the crop, may be added to spray solutions according to the manufacturer's use instructions to achieve optimum control.

Though Tolfenpyrad 15SC insecticide has been tested on a wide variety of common finished greenhouse crops (see Table 1), crop injury is always possible due to the varying environmental conditions under which this product may be applied. Young herbaceous crops such as bedding plant plugs may be more susceptible than mature plants. **The user MUST test Tolfenpyrad 15SC insecticide on a small area under local conditions and with the representative use (e.g. plant size, tank mixes, with fungicides, etc.) prior to any commercial application.** If any sign of crop damage or phytotoxicity occurs during the small-scale test, do not make commercial applications of Tolfenpyrad 15SC to that crop. **To the extent consistent with applicable law, the user or buyer assumes all risks and liability associated with applying Tolfenpyrad 15SC if commercial applications are made without first evaluating the representative use on the crop at a small scale on any species. The user or buyer assumes all risks and liability associated with applying Tolfenpyrad 15SC to any crop not listed in Table 1 (List of Plant Species Tested for Sensitivity to Tolfenpyrad 15SC Insecticide).**

Table 1. List of Plant Species Tested for Sensitivity to Tolfenpyrad 15SC Insecticide[1]

Common Name	Scientific Name
Arrowwood	*Viburnum spp.*
Ash	*Fraxinus spp.*
Cherry	*Prunus spp.*
Chrysanthemum	*Chrysanthemum spp.*
Coleus	*Solenostemon spp.*
Fanflower	*Scaevola aemula*
Gerbera (Transvaal Daisy)	*Gerbera spp.*
Lantana	*Lantana spp.*
Madwort	*Alyssum spp.*
Moss Rose	*Portulaca spp.*
Pentas	*Pentas lanceolata*
Schefflera	*Brassaia actinophylla*
Snapdragon	*Antirrhinum majus*
Yew	*Taxus media*
Zinnia	*Zinnia sp.*

1. Local conditions can influence crop tolerance and may not match those under which these species were tested. Before using **Tolfenpyrad 15SC** insecticide for commercial applications, test the product on a small sample of the crop to be treated with a representative crop to ensure crop injury does not occur.

Temporary phytotoxicity may occur to some species of *Ageratum*, Begonia, *Colocasia*, *Geranium*, Ground Orchid (*Spathoglottis plicata*), *Lobelia*, Marigold (*Tagetes spp.*), *Pansy (flowers)*, *Verbena*, and *Vinca*.

DO NOT APPLY TOLFENPYRAD 15SC INSECTICIDE TO *SALVIA* SPP., *IMPATIENS* SPP., *GYPSOPHILA* SPP., AND NEW GUINEA IMPATIENS DUE TO POTENTIAL CROP INJURY.

APPLICATION RATE CHART FOR TOLFENPYRAD 15SC INSECTICIDE

Citrus Fruit (Crop Group 10-10)

Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin orange, clementine); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

Pest	*Rate/Acre*	*Use Directions*
Asian citrus psyllid Katydid	14.0 to 27.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • For **ground applications,** do not use less than 100 gallons of water per acre. • For **high air velocity, low volume or air curtain sprayers**, do not use less than 30 gallons of water per acre. • Do not use on nursery stock. • Do not apply more than 27.0 fluid ounces per acre per growing season. • Do not make more than 1 application per growing season. • Do not make more than 2 applications per year. • Preharvest interval (PHI): 14 days
Aphids	17.0 to 27.0 fl oz/acre	
Citrus bud mite Citrus mealybug Citrus thrips Soft scale insects, including citricola scale, barnacle scale, and brown soft scale	21.0 to 27.0 fl oz/acre	
Citrus peelminer Citrus red mite Citrus rust mite (silver mite) Leafminer (CA: control; FL: suppression) Mealybugs Citrus orangedog* Citrus weevil* Cutworms* *suppression only	24.0 to 27.0 fl oz/acre	

Cotton (limited to states of Arizona, California, New Mexico)		
Pest	***Rate/Acre***	***Use Directions***
Aphids	14.0 to 21.0 fl oz/acre	***USE RESTRICTIONS*** • For **ground applications**, do not use less than 10 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • Do not apply more than 42.0 fluid ounces per acre per growing season. • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Preharvest interval (PHI): 14 days
Fleahopper	17.0 to 21.0 fl oz/acre	
Thrips Armyworms* Bollworms* Pink bollworm* Plant bugs* Stink bugs* Tobacco budworm* Whiteflies* *suppression only	21.0 fl oz/acre	

Grape (limited to states of California, Oregon, Washington) raisin; table; wine		
Pest/Disease	***Rate/Acre***	***Use Directions***
Leafhoppers	12.0 to 21.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • For **ground applications**, do not use less than 50 gallons of water per acre. • Do not apply more than 41.0 fluid ounces per acre per growing season. • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Preharvest interval (PHI): 7 days
Grape berry moth Leaffolders Leafrollers Mealybugs Thrips	21.0 to 27.0 fl oz/acre	
Japanese beetle, adults (topical application) Grapeleaf skeletonizer* Powdery mildew* *suppression only	24.0 to 27.0 fl oz/acre	

Leafy Vegetables (except brassica vegetables) (Crop Group 4)

amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard

Pest/Disease	*Rate/Acre*	*Use Directions*
Leafhoppers	14.0 to 21.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air in TX or East of the Mississippi River.** • Do not apply Tolfenpyrad 15SC insecticide until at least fourteen (14) days after emergence or after transplanting to allow time for root establishment. This period of time should be extended if conditions at time of emergence or transplanting are not favorable to crop growth. • For **ground applications**, do not use less than 20 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • Do not apply more than 42.0 fluid ounces per acre per crop cycle. • Do not make more than 2 applications per crop cycle. • Do not make more than 4 applications per year. • Allow at least 14 days between applications. • Preharvest interval (PHI): 1 day
Aphids (excluding lettuce aphid) Flea beetle	17.0 to 21.0 fl oz/acre	
Thrips Powdery mildew (*Erysiphe cichoracearum)* Armyworms* Corn earworm* Cutworm species* European corn borer* Imported cabbageworm* Tobacco budworm* Tomato hornworm* Whiteflies* Downy mildew* *suppression only	21.0 fl oz/acre	

		USE RECOMMENDATIONS-DISEASES • Begin applications prior to onset of disease. • Use of an agriculturally approved non-ionic surfactant at 0.25% v/v may improve disease control. • If weather conditions remain conducive to disease development, apply another registered fungicide product with a different mode of action 7 to 10 days later. • Consult local extension recommendations or your agricultural consultant for information specific to your area.

Potato (limited to states west of the Mississippi River)		
Pest	***Rate/Acre***	***Use Directions***
Colorado potato beetle Leafhoppers	14.0 to 21.0 fl oz/acre	***USE RESTRICTIONS*** • **No aerial applications in TX** • For **ground applications**, do not use less than 20 gallons of water per acre. • For **aerial applications**, do not use less than 5 gallons of water per acre. • See CHEMIGATION statement in Application Directions. • Do not apply more than 42.0 fluid ounces per acre per crop cycle. • Do not make more than 2 applications per crop cycle. • Allow at least 14 days between applications. • Preharvest interval (PHI): 14 days
Aphids Potato psyllid Thrips	17.0 to 21.0 fl oz/acre	

Stone Fruits (Crop Group 12-12); Persimmon; Pomegranate apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; persimmon; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; pomegranate; sloe; cultivars, varieties, and/or hybrids of these		
Pest/Disease	***Rate/Acre***	***Use Directions***
Cherry fruit fly Katydid Leafhoppers	14.0 to 27.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • For **ground applications**, do not use less than 50 gallons of water per acre. • Do not apply by Alternate Row Middle (ARM) spray method. • Do not apply more than 54.0 fluid ounces per acre per growing season. • Do not make more than 2 applications per growing season. • Allow at least 10 days between applications. • Preharvest interval (PHI): 14 days
Aphids	17.0 to 27.0 fl oz/acre	
Apple maggot Leafrollers Mealybugs Plum curculio Green fruitworm* Peach twig borer* Powdery mildew* Spotted wing drosophila* Stink bugs* Thrips* *suppression only	21.0 to 27.0 fl oz/acre	

Tree Nuts (Crop Group 14-12) African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these		
Pest	***Rate/Acre***	***Use Directions***
Aphids	17.0 to 27.0 fl oz/acre	***USE RESTRICTIONS*** • **Do not apply by air.** • Maintain a minimum of 25 feet of vegetative filter (buffer) strip. • For **ground applications**, do not use less than 50 gallons of water per acre. • Do not apply by Alternate Row Middle (ARM) spray method. • Do not apply more than 27.0 fluid ounces per acre per growing season. • Do not make more than 1 application per growing season. • Preharvest interval (PHI): 14 days
Hickory shuckworm Leafrollers Mealybugs Pecan nut casebearer Navel orangeworm* Peach twig borer* Pecan leaf scorch mite* Pecan weevil* Plant bugs* Stink bugs* *suppression only	21.0 to 27.0 fl oz/acre	

APPLICATION RATE CHART FOR TOLFENPYRAD 15SC INSECTICIDE

Greenhouse ornamental plants EXCEPT cut flowers		
Pest	***Dilution Rate FL OZ/100 Gallons***	***Use Directions***
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly* Powdery mildew* *suppression only	21 to 32 fl oz per 100 gal	• Do not apply more than 32 fl oz/100 gal (1.36 lbs a.i./acre) per application. • Do not apply more than 100 gallons of spray solution per 10,000 sq. ft. per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse. • Do not apply more than 2 applications per crop cycle. • Do not apply more than 64 fl oz/100 gal (2.72 lbs a.i./acre) per crop cycle. • Allow at least 10 days between applications. • Preharvest interval (PHI): 0 days • Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Spray to the point of runoff. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.

Greenhouse ornamental plants grown for cuttings (e.g. cut flowers)		
Pest	***Dilution Rate FL OZ/100 Gallons***	***Use Directions***
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly* Powdery mildew* *suppression only	14 to 32 fl oz per 100 gal	• Do not apply more than 32 fl oz/100 gal (1.36 lbs a.i./acre) per application. • Do not apply more than 100 gallons of spray solution per 10,000 square feet per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse. • Do not apply more than 2 applications per crop cycle. • Do not apply more than 64 fl oz/100 gal (2.72 lbs a.i./acre) per crop cycle. • Do not apply more than 4 applications per year. • Allow at least 10 days between applications. • Preharvest interval (PHI): 0 days • Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, and keep tightly closed when not in use. Store in a cool, dry place.

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

CONTAINER HANDLING:

Nonrefillable plastic container (Less than 5 gallons)

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable plastic container (Greater than 5 gallons)

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

Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

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 a 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable metal container (Greater than 5 gallons)

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

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

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 a 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Refillable plastic container
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 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. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration or by other procedures approved by state and local authorities.

Refillable metal container
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 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. Return to point of sale or offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability or otherwise.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT.

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Wilmington, DE 19808
888-740-7700

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Appendix

Text that may be included on the container label or promotional information supporting this product:

Hachi-Hachi:

- For Indoor Greenhouse Use on Ornamental Plants
- For the control of aphids, leafhoppers, Lepidopteran insects, mealybugs, scale, and thrips on indoor greenhouse ornamental plants