

71711-21

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

JUL 10 2009

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Marie A. Maks, Manager, Regulatory Affairs
Nichino America, Inc.
Linden Park, Suite 501
4550 New Lindon Hill Road
Wilmington, DE 19808

Subject: New Uses on Brassica, Coffee, and Pomegranate

EPA Reg. Nos.: Buprofezin Technical (EPA Reg. No. 71711-16), Buprofezin 40SC Insect Growth Regulator (EPA Reg. No. 71711-20), Applaud 70 DF Growth Regulator (EPA Reg. No. 71711-21)

Decisions: 396787, 391754, 396789, 391757, 391758

The labeling referred to above, submitted in connection with registration under the Federal insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable subject to the comments listed below.

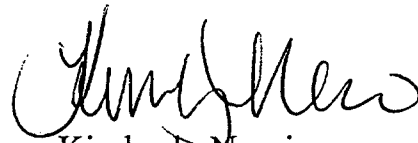
Nichino must conduct and submit the following four studies with the timeframe listed below as a condition of registration:

- a. Acute Neurotoxicity study (OPPTS Guideline No. 870.6200(a)) within 1 year of the date of this letter;
- b. Subchronic Neurotoxicity study (OPPTS Guideline No. 870-6200(b)) within 18 months of the date of this letter;
- c. Immunotoxicity study (OPPTS Guideline No. 870.7800) within 18 month of the date of this letter; and
- d. Developmental Thyroid study (Special Study) within 2 years of the date of this letter.

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If you have any questions/comments, please contact Melody Banks on (703) 305-5413.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kimberly Nesci', written in a cursive style.

Kimberly Nesci
Product Manager 11
Insecticide Branch
Registration Division (7507P)

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Nichino America, Inc.

GROUP 16 INSECTICIDE

APPLAUD® 70DF Insect Growth Regulator

ACTIVE INGREDIENT:

Buprofezin: 2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one 70.00%

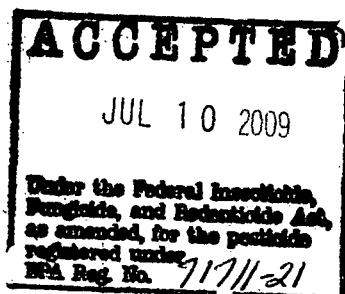
OTHER INGREDIENTS: 30.00%

TOTAL 100.00%

Contains 0.70 lbs. buprofezin per pound of product

EPA Reg. No. 71711-21
EPA Est. No. 67545-AZ-1

Marketing Brands:
Centaur® WDG



KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
If inhaled	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> 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.
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 treatment 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: _____

Active Ingredient Made in China; Formulated and Packaged in U.S.A. for

Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

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

User Safety Recommendations

Users should: Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

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

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 contaminate water by cleaning of equipment or disposal of equipment washwaters.

IMPORTANT – Read the entire Directions for Use and Disclaimer of Warranties before using this product.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during restricted entry interval (REI) 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

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- Waterproof gloves
- Socks and chemical-resistant footwear

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, or greenhouses. For other uses, including golf courses and other nonagricultural uses, do not enter treated areas without protective clothing until sprays have dried.

GENERAL INFORMATION

APPLAUD® 70DF insect growth regulator contains the active ingredient, buprofezin. It is effective against the nymph stages of whitefly, scales, psylla, mealybugs, planthoppers, and leafhoppers by inhibiting chitin biosynthesis, suppressing oviposition of adults, and reducing viability of eggs. Treated susceptible pests may remain alive on the plant for 3-7 days, but feeding damage during this time is typically very low. APPLAUD 70DF is not disruptive to beneficial insects and mites.

Good coverage is essential. Apply by ground or air in sufficient water volume. Orient nozzles to assure good coverage. Use of higher volume of water will assure better coverage, especially under adverse conditions such as hot, dry weather, and/or a dense canopy. The entire field should be treated. Apply when economic infestations occur based on local information.

APPLAUD 70DF is not for sale, sale into, distribution, and or use in Nassau and Suffolk counties of New York state.

INSECTS CONTROLLED

Whiteflies: Ash whitefly; Banded wing whitefly; Greenhouse whitefly; Silverleaf whitefly; Sweet potato whitefly

Mealybugs: Citrus mealybug; Comstock mealybug; Gill's mealybug; Grape mealybug; Longtailed mealybug; Mexican mealybug; Obscure mealybug; Striped mealybug; Vine mealybug;

Leafhoppers and Planthoppers: Brown planthopper; Cherry leafhopper; Eastern grape leafhopper; Glassy-winged sharpshooter; Potato leafhopper; Variegated leafhopper; Western grape leafhopper, White apple leafhopper

Pear Psylla

Scales:

Soft Scales: Barnacle scale; Black scale; Brown soft scale; Citricola scale; False oleander scale; Hemispherical scale; Indian wax scale and other wax scales; Tessellated scale; White peach scale

Armored Scales: Boisduval scale; Cactus scale; California red scale; Coconut scale; Fern scale; Florida red scale; Oystershell scale; San Jose scale

Margarodid Scale: Cottony cushion scale

RESISTANCE MANAGEMENT

APPLAUD 70DF is classified by IRAC in Group 16 – chitin synthesis inhibitors and is not known to be cross-resistant to other classes of insecticides. However, insect pests are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the crop and use area. Such strategies may include rotating with insecticides with different modes of action. Consult your local pest control advisor or extension office for details. If resistance to this product develops in your area, it may not provide adequate control. If you experience difficulty with control, and resistance is a likely cause, consult your local state university horticultural specialist or local agricultural authorities for the best alternative method of control. To preserve the usefulness of APPLAUD 70DF, do not make more than two consecutive applications. Prior to subsequent applications, use an alternative chemistry with a different mode of action. Always consult your local crop advisor for the most appropriate control decision for your area. Resistance management strategies advise against applying rates lower than those recommended on the label.

For greenhouses: If another insect growth regulator with the same mode of action as a chitin synthesis inhibitor (i.e. cyromazine, diflubenzuron, and novaluron) has been used in the greenhouse within 28 days, do not apply APPLAUD 70DF as the first whitefly application.

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MIXING, LOADING, AND HANDLING INSTRUCTIONS

SPECIFIC MIXING INSTRUCTIONS

APPLAUD 70DF ALONE: Fill spray tank with $\frac{3}{4}$ 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 balance of the water 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.

APPLAUD 70DF TANK MIXTURES: Follow all use directions as listed above under **APPLAUD 70DF ALONE** with the following exception: after the APPLAUD 70DF is thoroughly mixed and the tank is $\frac{3}{4}$ full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, **while maintaining agitation**. If a spray additive is needed, add a liquid fertilizer, surfactant, or crop oil concentrate to the spray tank at this time. Then continue adding water to the tank to achieve the desired level, while maintaining agitation.

APPLAUD 70DF TANK MIXTURES WITH PRODUCTS IN WATER-SOLUBLE PACKAGING: Follow all use directions as listed above under **APPLAUD 70DF ALONE** with the following exception: add the desired number of water-soluble bags to the tank (if allowed by their label instructions) at the same time the APPLAUD 70DF is added. **Note:** If using products in water soluble packaging, do not tank mix with products that contain boron, chromium, or other micronutrients.

APPLICATION DIRECTIONS

Applications should be made immediately after the spray solution is prepared. Thorough spray coverage is essential for effective control. Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. For best results, apply when pest populations are beginning to build, before reaching economic thresholds. Consult your local agricultural advisor, state cooperative extension service, or regional Nichino America representative for recommendations.

USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Crop Rotational Restrictions:

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Leafy vegetables not registered for use with buprofezin	30 days following application
Root and tuber vegetables	60 days following application
All other crops	365 days following application

USE PRECAUTIONS

- Apply in a minimum finished spray volume of 5 gallons per acre by air. For gallonage per acre by ground, refer to Application Rate Chart.
- Phytotoxicity may occur in Oriental Pear varieties, normally limited to applications made prior to petal fall.

APPLICATION RATE CHART FOR APPLAUD 70DF INSECT GROWTH REGULATOR

Crop	Pest	Formulated Product/A (Rate Represented in Lbs)	Directions for Use
Acerola Atemoya Avocado Biriba Cherimoya Custard apple Feijoa Guava Ilama Jaboticaba Passion fruit Soursop Starfruit Sugar apple Wax jambu	Scales	34.5 oz/A (2.156 lbs/A)	USE RESTRICTIONS <ul style="list-style-type: none">• Limited to Florida, Hawaii, and Puerto Rico• Apply by ground application using a minimum of 20 gallons of water per acre.• Do not make more than 2 applications per growing season.• Allow at least 14 days between applications.• Do not apply more than 69.0 oz (4.3 lbs) per acre per growing season.• Do not apply within 21 days of harvest. RECOMMENDATIONS <ul style="list-style-type: none">• Treatment should be made when peak crawler emergence occurs. Consult local and State agricultural authorities for details.• Good coverage is essential.
	Leafhoppers Mealybugs Whiteflies	9.0 to 12.0 oz/A (0.56 to 0.75 lbs/A)	
Black sapote Canistel Mamey sapote Mango Papaya Sapodilla Star apple	Leafhoppers Mealybugs Scales Whiteflies	9.0 to 12.0 oz/A (0.56 to 0.75 lb/A)	USE RESTRICTIONS <ul style="list-style-type: none">• Limited to Florida, Hawaii, and Puerto Rico• Apply by ground application using a minimum of 20 gallons of water per acre.• Do not make more than 5 applications per growing season.• Allow at least 14 days between applications.• Do not apply more than 45.0 oz (2.8 lbs) per acre per growing season.• Do not apply within 3 days of harvest. RECOMMENDATIONS <ul style="list-style-type: none">• Treatment should be made when peak crawler emergence occurs. Consult local and State agricultural authorities for details.• Good coverage is essential.
Almonds Pistachios	Mealybugs, (including Gill's Mealybug) Scales	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	USE RESTRICTIONS <ul style="list-style-type: none">• Apply by ground application using a minimum of 100 gallons of water per acre.• Do not make more than 1 application per growing season.• Do not apply within 60 days of harvest. RECOMMENDATIONS

			<ul style="list-style-type: none"> • Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. • Scale: Application can be made at delayed dormant (or when San Jose scale is at the white or black cap stage) or in-season at peak crawler stage. • Good coverage is essential.
Apples Crabapple Loquat Mayhaw Quince	Leafhoppers	9.0 to 12.0 oz/A (0.56 to 0.75 lb/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 20 gallons of water per acre. • Do not make more than 1 application per growing season. • Do not apply more than 34.5 oz (2.156 lbs) per acre per growing season. • Do not apply within 14 days of harvest.
	Mealybugs Scales	34.5 oz (2.156 lbs/A)	<p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • San Jose scale: Application can be made at delayed dormant, pink, and petal fall when the scale is at white or black cap state or at peak crawler emergence in-season. • Other scales: Apply at peak crawler emergence. • Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. • Good coverage is essential.
Bananas	Leafhoppers Mealybugs Scales Whiteflies	7.0 oz/A (0.438 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 15 gallons of water per acre. • Do not make more than 4 applications per growing season. • Allow at least 14 days between applications. • Do not apply within 1 day of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. Consult local or State agricultural authorities for details. • Good coverage is essential. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.
Citrus Crop Group: Calamondin Citrus citron Citrus hybrids (includes chironja, tangelo, tangor) Grapefruit Kumquat	Black scale California red scale Citricola scale Cottony cushion scale Glassy-winged sharpshooter Mealybugs	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 750 gallons of water per acre. • Do not make more than 2 applications per growing season. • Allow at least 60 days between applications. • Do not apply within 3 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be made when peak crawler emergence occurs. Consult local and State agricultural authorities for

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Lemon Lime Mandarin (tangerine) Orange, sour Orange, sweet Pummelo Satsuma mandarin White sapote (Casimiroa spp.)			<p>details.</p> <ul style="list-style-type: none"> • Good coverage is essential.
Coffee	Mealybugs Scales	<p>23.0 oz/A</p> <p>(1.43 lbs/A)</p>	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre. • Do not make more than 4 applications per year. • Allow at least 14 days between applications. • Do not apply more than 91.0 oz (5.72 lbs) per acre per year. • Harvest on application date permitted (0 day PHI). <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details. • Good coverage is essential.
Grapes	Leafhoppers Mealybugs	<p>9.0 to 12.0 oz/A</p> <p>(0.56 to 0.75 lb/A)</p>	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre per season depending on the size of the grapevine canopy. • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 24.0 oz (1.5 lbs) per acre per growing season. • Do not apply within 7 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Leafhopper: Apply when majority of the population is at the early nymphal stage. • Mealybug: Apply at the beginning of crawler emergence. • Good coverage is essential. Orient nozzles to assure good coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.
Longan Lychee Pulasan	Scales	<p>34.5 oz/A</p>	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 75 gallons per acre spray volume. • Allow at least 14 days between applications.

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Rambutan Spanish Lime		(2.156 lbs/A)	<ul style="list-style-type: none"> Do not make more than 2 applications per year. Do not apply more than 69.0 oz (4.3 lbs) per acre per growing season. Do not apply within 21 days of harvest.
Olives	Scales	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Apply by ground application using a minimum of 110 gallons of water per acre, depending on the size of the olive trees. Do not apply more than 92.0 oz (5.75 lbs) per acre per growing season. Allow at least 50 days between applications. Do not apply within 21 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details. Good coverage is essential. Orient nozzles to assure good coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.
Pear Oriental Pear	Mealybugs Pear psylla Scales	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Apply by ground application using a minimum of 20 gallons of water per acre. Do not make more than 2 applications per growing season. Allow at least 7 days between applications. Do not apply more than 69.0 oz (4.3 lbs) per acre per growing season. Do not apply within 14 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. San Jose scale: Application can be made at delayed dormant, pink, and petal fall when the scale is at white or black cap state and at peak crawler emergence in-season. Other scales: Apply at peak crawler emergence. Good coverage is essential. Phytotoxicity may occur in Oriental Pear varieties, normally limited to applications made prior to petal fall.
Stone Fruit Crop Group: Apricot Cherry, sweet Cherry, tart Nectarine Peach	Mealybugs Scales	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Apply by ground application using a minimum of 50 gallons of water per acre. Do not make more than 2 applications per growing season. Allow at least 14 days between applications. Do not apply more than 69.0 oz (4.3 lbs.) per acre per growing season. Do not apply within 14 days of harvest.

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Plum Plum, Chickasaw Plum, Damson Plum, Japanese Plumcot Prune (fresh)			<p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. • Scale: Application can be made at delayed dormant (or when San Jose scale is at the white or black cap stage) and in-season at peak crawler hatch. • Good coverage is essential.
Pomegranates	Whiteflies	<p>12.0 to 34.5 oz/A</p> <p>(0.75 to 2.156 lbs/A)</p>	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre. • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 69 oz per acre per growing season. • Do not apply within 14 days of harvest.
	Mealybugs Scales	<p>34.5 to 46.0 oz/A</p> <p>(2.156 to 2.875 lbs/A)</p>	<p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Whitefly: Apply at early nymph threshold. • Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. • Scale: Application can be made at delayed dormant (or when San Jose scale is at the white or black cap stage) and in-season at peak crawler hatch. • Good coverage is essential.
Greenhouse Tomatoes	Leafhoppers Mealybugs Planthoppers	<p>9.0 oz/A</p> <p>(0.56 lbs/A)</p>	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • For greenhouse tomatoes, apply by ground on 2 acre minimum with 20 gallons of water per acre. • Apply no more than 2 applications per growing cycle. • Allow at least 5 days between applications. • Do not apply within 1 day of harvest. <p>RECOMMENDATIONS</p>
	Whiteflies	<p>6.0 to 9.0 oz/A</p> <p>(0.38 to 0.56 lbs/A)</p>	<ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. Consult local and state agricultural authorities for details. • Apply in sufficient water to obtain complete coverage of all plant parts. Good coverage is essential. • Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) 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.

Ornamental plants in greenhouses; lath and shadehouses; nurseries; landscape ornamentals; ground covers; field-and container-grown ornamentals; non-bearing fruit and nut trees and vines in nurseries; Christmas trees	Leafhoppers Mealybugs Planthoppers	12.0 oz/A (0.75 lb/A)	USE RESTRICTIONS <ul style="list-style-type: none"> • Make no more than 2 applications of buprofezin per crop per growing season.
	Scales	14.0 oz/A (0.88 lb/A)	RECOMMENDATIONS <ul style="list-style-type: none"> • Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) 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. • Apply the specified dosage as a foliar spray in sufficient water for complete, uniform coverage, including stems and underside of leaves. Spray to the point of runoff. • Whitefly, Leafhopper or Planthopper: Make first application as soon as adult insects begin to appear. • Mealybug: Make first application as soon as insect activity is observed. • Scale: Make first application when crawlers are emerging. • If additional insecticide applications are required for control, use another class of chemistry or a different Insect Growth Regulator (IGR) with a different mode of action before making subsequent applications of buprofezin. • Consult local or state agricultural authorities for details concerning economic thresholds for each target pest.
	Whiteflies	6.0 oz/A (0.38 lb/A)	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, unopened, in a cool, dry place.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) 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, 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.

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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SUPPLEMENTAL LABEL

NICHINO AMERICA, INC.

GROUP

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INSECTICIDE

Applaud® 70DF Insect Growth Regulator For Use on Coffee

EPA Reg. No. 71711-21

DIRECTIONS FOR USE

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

This labeling and the EPA approved container label must be in the possession of the user at the time of application.

New crops appear on this supplemental labeling that do not appear on the Section 3 container label.

NOTICE: Before using this product, read the First Aid, Precautionary Statements, Conditions of Sale and Warranty, and complete Directions for Use found on the container labeling. All applicable directions, restrictions, and precautions on the EPA registered label are to be followed.

Crop	Pest	Formulated Product/A	Directions for Use
Coffee	Mealybugs Scales	23.0 oz/A (1.43 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> ▪ Apply by ground application using a minimum of 50 gallons of water per acre. ▪ Do not make more than 4 applications per year. ▪ Allow at least 14 days between applications. ▪ Do not apply more than 91.0 oz (5.72 lbs) per acre per year. ▪ Harvest on application date permitted (0 day PHI). <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> ▪ Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details. ▪ Good coverage is essential.

USE RESTRICTIONS:

Crop Rotational Restrictions

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Leafy vegetables not registered for use with buprofezin	30 days following application
Root and tuber vegetables	60 days following application
All other crops	365 days following application

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SUPPLEMENTAL LABEL

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INSECTICIDE

Applaud® 70DF Insect Growth Regulator For Use on Olives

EPA Reg. No. 71711-21

DIRECTIONS FOR USE

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

This labeling and the EPA approved container label must be in the possession of the user at the time of application.

New crops appear on this supplemental labeling that do not appear on the Section 3 container label.

NOTICE: Before using this product, read the First Aid, Precautionary Statements, Conditions of Sale and Warranty, and complete Directions for Use found on the container labeling. All applicable directions, restrictions, and precautions on the EPA registered label are to be followed.

Crop	Pest	Formulated Product/A	Directions for Use
Olives	Scales	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply by ground application using a minimum of 110 gallons of water per acre, depending on the size of the olive trees. • Do not apply more than 92.0 oz (5.75 lbs) per acre per growing season. • Allow at least 50 days between applications. • Do not apply within 21 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details. • Good coverage is essential. Orient nozzles to assure good coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.

USE RESTRICTIONS:

Crop Rotational Restrictions

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Leafy vegetables not registered for use with buprofezin	30 days following application
Root and tuber vegetables	60 days following application
All other crops	365 days following application

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SUPPLEMENTAL LABEL

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INSECTICIDE

Applaud® 70DF Insect Growth Regulator For Use on Pomegranates

EPA Reg. No. 71711-21

DIRECTIONS FOR USE

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

This labeling and the EPA approved container label must be in the possession of the user at the time of application.

New crops appear on this supplemental labeling that do not appear on the Section 3 container label.

NOTICE: Before using this product, read the First Aid, Precautionary Statements, Conditions of Sale and Warranty, and complete Directions for Use found on the container labeling. All applicable directions, restrictions, and precautions on the EPA registered label are to be followed.

Crop	Pest	Formulated Product/A	Directions for Use
Pomegranates	Whiteflies	12.0 to 34.5 oz/A (0.75 to 2.156 lbs/A)	USE RESTRICTIONS <ul style="list-style-type: none"> Apply by ground application using a minimum of 50 gallons of water per acre. Do not make more than 2 applications per growing season. Allow at least 14 days between applications. Do not apply more than 69 oz per acre per growing season. Do not apply within 14 days of harvest.
	Mealybugs Scale	34.5 to 46.0 oz/A (2.156 to 2.875 lbs/A)	RECOMMENDATIONS <ul style="list-style-type: none"> Whiteflies: Apply at early nymph threshold. Scale: Application can be made at delayed dormant (or when San Jose scale is at the white or black cap stage) and in-season at peak crawler hatch. Mealybugs: Application should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. Good coverage is essential.

USE RESTRICTIONS:

Crop Rotational Restrictions

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Leafy vegetables not registered for use with buprofezin	30 days following application
Root and tuber vegetables	60 days following application
All other crops	365 days following application

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