

66222-203

3/21/2011

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



MAR 21 2011

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Jennifer Yentel
Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Road, Suite 300
Raleigh, NC 27609

Dear Ms. Yentel:

Subject: Amendment to add Agricultural uses and separate label into to sub labels
Quali-Pro Imidacloprid 2F
EPA Registration No. 66222-203
Your Submission Dated: December 15, 2010

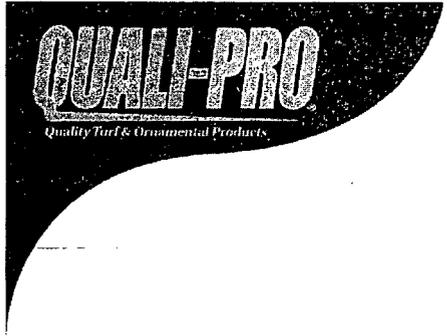
The labeling referred to above submitted in connection with the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable.

A stamped copy of the labeling is enclosed for your records. Please submit one final printed copy of the labeling before releasing the product for shipment. If you have any questions regarding this label, please contact Autumn Metzger at (703) 305-5314 or metzger.autumn@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle
Product Manager 01
Insecticide-Rodenticide Branch
Registration Division (7505P)



ACCEPTED
MAR 21 2011

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for the
pesticide registered under:

EPA. Reg. No: 66222-203

MASTER LABEL

Quali-Pro Imidacloprid 2F

Sublabel A: Turf and Ornamental and Nursery and Greenhouse Uses

- A. **Foliar and Systemic Insect Control for use on Turfgrass** including Sod Farms, Landscape Ornamentals, Fruit and Nut Trees and Interior Plantscapes
- B. **Foliar and Systemic Insect Control for use in Greenhouses, and Nurseries on Ornamentals, Fruit and Nut Trees and Vegetable Plants**

Sublabel B: Agricultural Uses

- A. **Systemic Insect Control for use on Field Crops** including Cotton, Peanuts, Potatoes, and Tobacco
- B. **Systemic Insect Control for use on Vegetable and Small Fruit Crops** including Cucurbit Vegetables, Greenhouse Vegetables (mature cucumbers and tomatoes only), Fruiting Vegetables, Globe Artichokes, Herbs, Brassica (Cole) Leafy Vegetables, Leafy Vegetables, Leafy Petiole Vegetables, Legume Vegetables, Root Vegetables, Tuberous and Corm Vegetables, Strawberries, and Sugarbeets
- C. **Tree, Bush, and Vine Crops** including Banana and Plantain, Bushberries, Caneberries, Citrus (Containerized and Field), Coffee, Cranberries, Grapes, Hops, Pome Fruit, Pomegranate, Tree Nuts, and Tropical Fruit
- D. **Miscellaneous Crops** including Christmas Trees, and Poplar/Cottonwood

ACTIVE INGREDIENT:	% BY WT.
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....	21.8%
OTHER INGREDIENTS:	<u>78.2%</u>
TOTAL:	100.0%

Contains 2 pounds of imidacloprid per gallon.
Shake well before using.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Manufactured for:
Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Rd., Suite 300
Raleigh, NC 27609

EPA Reg. No. 66222-203

EPA Est. No.

NET CONTENTS: ___ GALLONS

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Sublabel A: Turf & Ornamental and Nursery & Greenhouse Uses



Quali-Pro Imidacloprid 2F

For use on Turf and Ornamentals, Nurseries and Greenhouses

FOLIAR AND SYSTEMIC INSECT CONTROL

ACTIVE INGREDIENT:	% BY WT.
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	21.8%
OTHER INGREDIENTS:	<u>78.2%</u>
TOTAL	100.0%

Contains 2 pounds of imidacloprid per gallon.
Shake well before using.

Contains imidacloprid, the active ingredient in MERIT 2F Insecticide.
Quali-Pro Imidacloprid 2F Insecticide is not manufactured or distributed by Bayer.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

Manufactured for:
Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Rd, Suite 300
Raleigh NC 27609

EPA Reg. No. 66222-203

EPA Est No. XXXXXXXXXX

NET CONTENTS: ___ GALLON

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • 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 by mouth to an unconscious person.
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 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 soap and water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.

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IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 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: In case of emergency, contact Prostar at 1-877-250-9291. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
NOTE TO PHYSICIAN: No specific antidote is available. Treat patient symptomatically.	

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

WPS Uses:

Applicators and other handlers (mixers and loaders) who handle this product for uses covered by the Worker Protection Standard (40 CFR Part 170) – such as sod farms, must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

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

Non-WPS Uses:

Applicators and other handlers must wear:

- Shirt and pants
- Gloves
- Shoes plus socks

ENGINEERING CONTROLS STATEMENTS

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(4)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.
- Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Apply this product only as specified on this label. Extreme care must be taken to avoid runoff. Apply only to soil or other fill substrate that will accept the solution at the specified rate. Do not treat soil that is water-saturated or frozen or in any conditions where run-off or movement from the treatment area (site) is likely to occur.

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 the restricted-entry interval (REI) of 12 hours.

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

NON-AGRICULTURAL 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.

Keep children and pets off treated area until dry.

STATE SPECIFIC RESTRICTIONS

The state of Arizona has not approved this product for use on agricultural sites. Do not use this product on uses considered by the Arizona statutes to be agricultural uses. *[Note to Label Editor: This is a voluntary statement added by notification. It may be deleted from the label at such time as the Arizona statutes change or a permission letter is acquired from the basic data submitter.]*

APPLICATION ON TURFGRASS

QUALI-PRO IMIDACLOPRID 2F may be used to control listed insect pests on turfgrass in residential lawns, business and office complexes, shopping complexes, multi-family residential complexes, golf courses, airports, cemeteries, parks, playgrounds, athletic fields and sod farms.

QUALI-PRO IMIDACLOPRID 2F controls listed soil inhabiting pests such as Northern & Southern masked chafers, *Cyclocephala borealis*, *C. immaculata*, and/or *C. lurida*; Asiatic garden beetle, *Maladera castanea*; European chafer, *Rhizotrogus majalis*; Green June beetle, *Cotinis nitida*; May or June beetle, *Phyllophaga* spp.; Japanese beetle, *Popillia japonica*; Oriental beetle, *Anomala orientalis*; Billbugs *Spherophorus* spp.; Annual bluegrass weevil, *Hyperodes* spp.; Black turfgrass ataenius, *Ataenius spretulus* and *Aphodius* spp.; European Crane Fly, *Tipula paludosa*; and mole crickets, *scapteriscus* spp. QUALI-PRO IMIDACLOPRID 2F can also be used for suppression of cutworms and chinch bugs.

For optimum control, make applications preceding or during the egg laying period of the target pest. The active ingredient in QUALI-PRO IMIDACLOPRID 2F has enough residual activity so that applications can be made preceding the egg laying activity. Application timing can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Most favorable control will be achieved when applications are made prior to egg hatch of the target pests. Follow applications with sufficient irrigation or rainfall to move the active ingredient through the thatch.

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RESTRICTIONS: Do not make applications when turfgrass areas are waterlogged or the soil is saturated with water. Sufficient distribution of the active ingredient cannot be achieved under these conditions. The treated turf area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile. Applications cannot exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.

APPLICATION EQUIPMENT FOR USE ON TURFGRASS

Apply QUALI-PRO IMIDACLOPRID 2F in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for the application of turfgrass insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

RESTRICTION: Do not apply through any irrigation system.

APPLICATIONS

TURF GRASSES

PEST	RATE	APPLICATION INSTRUCTIONS
Larvae of: Annual bluegrass weevil Asiatic garden beetle Billbug Black turfgrass ataeinus Cutworms (suppression) European chafer European crane fly Green June Beetle Japanese beetle Northern Masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	1.25 to 1.6 pt/A or 0.46 to 0.6 fl. oz. (14 to 17 mL) per 1000 sq. ft.	For best control of grubs, billbugs, annual bluegrass weevil, and European Crane Fly, apply prior to egg hatch of the target pest. Read APPLICATION EQUIPMENT section of this label.
Chinch bugs (suppression) Mole crickets	1.6 pt /A or 0.6 fl. oz. (17 mL) per 1000 sq. ft.	For suppression of chinch bugs, apply before hatching of the first instar nymphs. To control mole crickets apply before or during the peak egg hatch period. Use a curative insecticide in addition to QUALI-PRO IMIDACLOPRID 2F when adults or large nymphs are present and actively tunneling. Follow label instructions for other insecticides when tank-mixing.

Consult your local turf, state Agricultural Experiment Station, or State Extension Service Specialists for more specific information regarding timing of application.

Irrigation or rainfall must occur within 24 hours after application to move the active ingredient through the thatch. Do not mow turf or lawn area until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected.

RESTRICTION: Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

APPLICATION TO ORNAMENTALS

QUALI-PRO IMIDACLOPRID 2F is for use on ornamentals in commercial and residential landscapes and interior plantscapes. QUALI-PRO IMIDACLOPRID 2F is a systemic product and will be taken up into the plant system from root uptake. The product must be placed where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer, where applicable, into the solution may enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications including soil injection, drenches, and broadcast sprays. Foliar applications offer locally systemic activity against insect pests.

When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is taken up throughout the plant. In some cases, this translocation delay could take 60 days or longer. For this reason, apply prior to anticipated pest infestation to achieve optimum levels of control.

RESTRICTIONS:

- For outdoor applications, do not exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.
- Not for use in commercial greenhouses, nurseries, or on grass grown for seed or on commercial fruit and nut trees.

Ant Management Programs

Use QUALI-PRO IMIDACLOPRID 2F to control aphids, scale insects, mealybugs and other sucking pests on ornamentals to limit the honeydew available as a food source for ant populations. QUALI-PRO IMIDACLOPRID 2F applications can be then supplemented with residual sprays, bait placements or other ant control tactics to further reduce the pest population.

APPLICATION EQUIPMENT FOR FOLIAR APPLICATIONS

QUALI-PRO IMIDACLOPRID 2F mixes readily with water and may be used in many types of application equipment. Mix product with the required amount of water and apply as desired dependent upon the selected use pattern.

When making foliar applications on hard to wet foliage such as holly, pine or ivy, the addition of a spreader/ sticker is recommended. If concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the area sprayed as would be used in a dilute application.

QUALI-PRO IMIDACLOPRID 2F has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers, and other commonly used insecticides. Check physical compatibility using the correct proportion of products in a small jar test if local experience is unavailable.

RESTRICTION: Do not apply through any irrigation system.

APPLICATIONS

FOR USE ONLY IN AND AROUND THE PERIMETER OF INDUSTRIAL AND COMMERCIAL BUILDINGS AND RESIDENTIAL AREAS

CROP	PEST	RATE	APPLICATION INSTRUCTIONS
Trees Shrubs Evergreens Flowers Foliage plants Groundcovers Interior plantscapes	Adelgids Aphids Japanese beetles Lace bugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Mealybugs Psyllids Sawfly Larvae Thrips (suppression) Whiteflies	1.5 fl. oz. (45 mL) per 100 gal of water	Foliar Applications: Begin applications before the onset of high pest populations and reapply as needed.
	White grub larvae (such as Japanese beetle larvae, Chafers, <i>Phyllophaga</i> spp., Asiatic garden beetle, Oriental beetle)	0.46 to 0.6 fl. oz. (14 to 17 mL) per 1000 sq. ft.	Broadcast Applications: Use enough water to mix the product and thoroughly apply to the treatment area. Do not use less than 2 gallons of water per 1000 sq ft. Irrigate after application to incorporate QUALI-PRO IMIDACLOPRID 2F into the upper soil layer. For additional use directions, refer to the FLOWERS and GROUND COVERS section of this label.

SOIL INJECTION* AND SOIL DRENCH APPLICATIONS IN AND AROUND THE PERIMETER OF INDUSTRIAL AND COMMERCIAL BUILDINGS AND RESIDENTIAL AREAS, AND STATE, NATIONAL AND PRIVATE WOODED AND FORESTED AREAS

*No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York.

PEST	CROP/RATE	APPLICATION INSTRUCTIONS	REMARKS
Adelgids Aphids Armored scales (suppression) Black vine weevil larvae Eucalyptus longhorned borer Flatheaded borer (including bronze, alder and emerald ash) Japanese beetles Lace bugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Pine tip moth larvae Psyllids Roundheaded borers (including Asian longhorned beetles) Royal palm bugs Sawfy larvae Soft scales Thrips (suppression) White grub larvae Whitefies	<p style="text-align: center;">TREES</p> <p>Use the following rates as a function of tree diameter at breast height (D.B.H.):</p> <p>Apply 0.1 to 0.4 fl. oz. (3 to 12 mL) per inch of trunk diameter (D.B.H.)</p> <p>You may use the higher rate (0.3 – 0.4 fl. oz.) only for trees greater than 15 D.B.H. to control the following pests: Asian longhorned beetle, Emerald Ash Borer, Eucalyptus longhorned borer, Bronze birch borer, Alder borer</p> <p style="text-align: center;">RESTRICTION:</p> <p>Do not exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.</p> <p>Diameter at Breast Height (D.B.H.) = is measured at 4.5 feet from the ground.</p>	<p>SOIL INJECTION:</p> <p>Grid System: Space holes in a grid pattern on 2.5 foot centers extending to the drip line of the tree.</p> <p>Circle System: Apply in holes evenly spaced in circles (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line.</p> <p>Basal System: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.</p> <p>Soil Drench: Apply uniformly as a drench around the base of the tree in not less than 10 gallons of water per 1000 square feet. Direct application to the root area. Remove plastic or any other barrier that will stop solution from reaching the root zone.</p>	<p>Use enough water to mix the product and inject an equal amount of solution in each hole. Use low pressure and sufficient solution for distribution of the liquid into the treatment area. Keep the treated area moist for 7 to 10 days.</p> <p>Do not use less than 4 holes per tree.</p> <p>For Control of Specified Borers: Trees with existing insect damage and stress may not recover after treatment with QUALI-PRO IMIDACLOPRID 2F.</p>
Thrips (suppression) White grub larvae Whitefies	<p style="text-align: center;">SHRUBS</p> <p>0.1 to 0.2 fl. oz. (3 to 6 mL) per foot of shrub height</p>	<p>Soil Injection: Apply at the specified dosage to each plant.</p> <p>Soil Drench: Apply uniformly as a drench around the base of the tree in not less than 10 gallons of water per 1000 square feet. Direct application to the root area. Remove plastic or any other barrier that will stop solution from reaching the root zone.</p>	<p>Use enough water to mix the product and inject an equal amount of solution in each hole. Use low pressure and sufficient solution for distribution of the liquid into the treatment area. Keep the treated area moist for 7 to 10 days.</p> <p>Do not use less than 4 holes per shrub.</p>
	<p style="text-align: center;">FLOWERS AND GROUNDCOVERS</p> <p>0.46 to 0.6 fl. oz. (14 to 17 mL) per 1000 sq. ft.</p>	<p>Apply as a broadcast treatment before or after planting; or apply after plants are established. Mix into soil. On established plants, irrigate thoroughly after application.</p>	

FOLIAR APPLICATIONS FOR USE ONLY IN AND ON RESIDENTIAL AREAS

CROP	PEST	RATES	APPLICATION INSTRUCTIONS
<p>POME FRUITS Apple Crabapple Loquat Mayhaw Pear Pear (oriental) Quince</p>	<p>Aphids (except Woolly apple aphid) Leafhoppers (including glassy-winged sharpshooter) Leafminer Mealybugs* San Jose scale*</p>	<p>1.5 fl oz (45 mL) per 100 gal or 6.0 fl oz/A¹</p>	<p>Apply specified dosage as foliar spray as needed after petal-fall is complete.</p> <p>For control of rosy apple aphid, apply prior to leafrolling caused by the pest.</p> <p>For first generation leafminer control, make first application as soon as petal-fall is complete. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, optimal control is obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. QUALI-PRO IMIDACLOPRID 2F will not control late stage larvae.</p> <p>For San Jose Scale, time applications to the crawler stage. Treat each generation.</p> <p>For late season (preharvest) control of leafhopper species, apply QUALI-PRO IMIDACLOPRID 2F while most leafhoppers are in the nymphal stage.</p> <p>For control of mealybug, insure good spray coverage of the trunk and scaffolding limbs or other resting sites of the mealybug.</p> <p>RESTRICTIONS:</p> <ul style="list-style-type: none"> Do not apply more than 6.0 fluid ounces per acre in a single application. Do not make more than 5 applications per acre per year. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per year. Allow 10 or more days between applications. Allow at least 7 days between last application and harvest. <p>* Not for use in California for control on pears.</p>
<p>Pecan*</p>	<p>Yellow pecan aphid Black margined aphid Pecan leaf phylloxera Pecan spittlebug Pecan stem phylloxera</p>	<p>1.5 fl. oz. (45 mL) per 100 gal or 6.0 fl. oz./A¹</p>	<p>Make foliar applications as pests begin to build before populations become extreme. Two applications at a 10 to 14 day interval may be required to achieve control. Scout and re-treat if needed.</p> <p>Thorough uniform coverage of foliage is necessary for optimal control. Addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's use rate may improve coverage.</p> <p>RESTRICTIONS:</p> <ul style="list-style-type: none"> Do not apply more than a total of 18.0 fluid ounces of QUALI-PRO IMIDACLOPRID 2F per acre per year. Do not make more than 3 applications. Allow 10 or more days between applications. <p>* Use on pecans not permitted in California unless directed by specific supplemental labeling.</p>

¹ The amount of QUALI-PRO IMIDACLOPRID 2F required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees.

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FOLIAR APPLICATION FOR USE ONLY IN AND ON INDUSTRIAL AND COMMERCIAL BUILDINGS AND RESIDENTIAL AREAS

CROP	PEST	RATE	APPLICATION INSTRUCTIONS
Grapes	Leafhoppers (including glassy-winged sharpshooter) Mealybugs	1.5 fl. oz. (45 mL) per 100 gal or 3.0 fl. oz/A (90 mL/A)	Apply specified dosage as a foliar spray using 200 gallons of water per acre. RESTRICTIONS: <ul style="list-style-type: none"> Do not apply more than a total of 6.0 ounces of QUALI-PRO IMIDACLOPRID 2F per acre per year. Allow at least 14 days between applications. Applications may be applied up to and including day of harvest.

Restrictions

- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Do not allow runoff or puddling of irrigation water following application. Keep children and pets off treated area until dry.
- Do not apply QUALI-PRO IMIDACLOPRID 2F to areas which are water logged or saturated, which will not allow penetration into the root zone of the plant.
- Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

Treated areas may be replanted with any crop specified on an imidacloprid label or with any crop for which a tolerance exists for the active ingredient.

For crops not listed on an imidacloprid label or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval must be observed.

APPLICATION IN GREENHOUSES, NURSERIES, ORNAMENTALS, FRUIT AND NUT TREES AND VEGETABLE PLANTS

APPLICATION TO ORNAMENTALS AND VEGETABLE PLANTS

QUALI-PRO IMIDACLOPRID 2F may be used to control listed insect pests on ornamental and vegetable plants in nurseries and greenhouses. Insect protection is achieved because QUALI-PRO IMIDACLOPRID 2F is a systemic product and the active ingredient moves upward into the plant system. Apply QUALI-PRO IMIDACLOPRID 2F to the growing part of the plant for more absorption of the active ingredient. Nitrogen containing fertilizer may be added to the solution to aid in the uptake of the active ingredient where applicable. Apply QUALI-PRO IMIDACLOPRID 2F as a foliar spray or by soil applications such as soil injection, drenches, chemigation and broadcast sprays.

Soil applications to plants with woody stems will require applications of QUALI-PRO IMIDACLOPRID 2F before expected pest infestations due to the delay in the uptake of the active ingredient and the time until the product is taken up throughout the plant.

Restriction: For outdoor applications, do not exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.

Bark Media: The length of protection after treatment with QUALI-PRO IMIDACLOPRID 2F may be shortened if the media has 30% or more bark content.

Resistance: Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. Consult your Cooperative Extension Service for resistance management strategies and recommended pest management practices for your area.

APPLICATION EQUIPMENT FOR ORNAMENTALS AND VEGETABLE PLANTS

QUALI-PRO IMIDACLOPRID 2F mixes with water and may be applied with different types of application equipment. After mixing with the correct amount of water, follow the application directions for the selected use pattern

For applications on hard to wet foliage such as holly, pine or ivy, the use of a spreader/ sticker is recommended. For application by concentrate or mist type spray equipment, use the same amount as would be used in a dilute application.

QUALI-PRO IMIDACLOPRID 2F is compatible with frequently used fungicides, miticides, liquid fertilizers. Compatibility may be tested in a small jar by using the correct proportion of products if compatibility information is not available.

APPLICATION THROUGH IRRIGATION SYSTEMS

QUALI-PRO IMIDACLOPRID 2F may be applied alone or as a tank mixture with other chemicals or pesticides registered for application through irrigation systems. The normal dilution ratio is 1:100 to 1:200 depending on the system. Always meter the product into the irrigation water during the first part of the irrigation cycle. The product may be mixed separately prior to injection. Agitation may be necessary if the mixture is allowed to stand more than 24 hours.

Remove scale, pesticide residue and other foreign matter from the tank and entire irrigation system.

Apply QUALI-PRO IMIDACLOPRID 2F only through micro irrigation (individual spaghetti tubes), drip irrigation, overhead irrigation, ebb and flood, or hand-held or motorized calibrated irrigation equipment.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non uniform distribution of treated water.

If you have any questions about calibration, contact your State Extension Service specialist, equipment manufacturers or other experts in this area.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or a person who is under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

SAFETY DEVICES FOR IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES:

If the source of water for your irrigation system is a public water supply, follow the instructions below:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SAFETY DEVICES FOR IRRIGATION SYSTEMS NOT CONNECTED TO A PUBLIC WATER SUPPLY:

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being

withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where the pesticide distribution is adversely affected.
- 6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of material that is compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

APPLICATION TO GRASSY AREAS IN NURSERIES

QUALI-PRO IMIDACLOPRID 2F may be used on nursery grass in areas such as under or around field or container grown plants, on roadways or other grassy areas in or around nurseries.

QUALI-PRO IMIDACLOPRID 2F controls listed soil inhabiting pests of grassy areas of nurseries, such as Northern and Southern masked chafers, *Cyclocephala borealis*, *C. immaculata*, and/or *C. lurida*; Asiatic garden beetle, *Maladera castanea*; European chafer, *Rhizotroqus majalis*; Green June beetle, *Cotinis nitida*; May or June beetle, *Phyllophaga* spp.; Japanese beetle, *Popillia japonica*; Oriental beetle, *Anomala orientalis*; Billbugs, *Spherophorus* spp.; Annual bluegrass weevil, *Hyperodes* spp.; Black turfgrass atenius, *Ataenius spretulus* and *Aphodius* spp. and mole crickets, *Scapteriscus* spp. QUALI-PRO IMIDACLOPRID 2F can also be used for suppression of cutworms and chinch bugs.

For optimum control, make applications preceding or during the egg laying period of the target pest. The active ingredient in QUALI-PRO IMIDACLOPRID 2F has enough residual activity so that applications can be made preceding the egg laying activity. Application timing can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Most favorable control will be achieved when applications are made prior to egg hatch of the target pests. Follow application with sufficient irrigation or rainfall to move the active ingredient through the thatch.

RESTRICTIONS

- Do not make applications when grassy areas are waterlogged or the soil is saturated with water. Sufficient distribution of the active ingredient cannot be achieved under these conditions. The treated grassy area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile.
- Application cannot exceed a total of 1.6 pints (0.4 lb of active ingredient) per acre per year.

APPLICATION EQUIPMENT FOR USE ON GRASSY AREAS IN NURSERIES

Apply QUALI-PRO IMIDACLOPRID 2F in enough water to provide sufficient distribution in the treated area. Use accurately calibrated equipment typically used for the application of soil insecticides which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

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**APPLICATION SITES
GRASSY AREAS OF FIELD AND FOREST NURSERIES**

PEST	RATES	APPLICATION INSTRUCTION
Larvae of: Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass ataeenius <i>Phyllophaga</i> spp. Cutworms (suppression) European chafer Green June Beetle Japanese beetle Northern masked chafer Oriental beetle Southern masked chafer	19.2 to 25.6 fl. oz. per acre or 0.45 to 0.6 fl. oz. (13 to 17 mL) per 1,000 sq. ft.	For best control of grubs, billbugs and annual bluegrass weevil, make application prior to egg hatch of the target pest. Make sure to read APPLICATION EQUIPMENT section of this label. For suppression of chinch bugs, make application prior to the hatching of the first instar nymphs. For control of mole crickets make application before or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, QUALI-PRO IMIDACLOPRID 2F application should be accompanied by a curative insecticide. Follow label instructions for other insecticides when tank-mixing.
Chinch bugs (suppression) Mole crickets	25.6 oz/A or (17 mL) per 1,000 sq. ft.	Consult your local turf, state Agricultural Experiment Station, or State Extension Service Specialist for more specific information regarding timing of application. Irrigation or rainfall must occur within 24 hours after application to move the active ingredient through the thatch. Do not mow grass area until after adequate irrigation or rainfall has occurred so that evenness of application will not be affected. RESTRICTION: Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

**ORNAMENTALS
FOLIAR AND SYSTEMIC APPLICATION IN OR ON FIELD-GROWN NURSERY AND CONTAINER STOCK,
GREENHOUSE ORNAMENTALS, AND ORNAMENTALS GROWN IN FLAT BENCHES OR BEDS**

PEST	CROP	RATES	APPLICATION INSTRUCTION
Adelgids Aphids Japanese beetles (adults) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Sawfly larvae Thrips (suppression) Whiteflies	Trees (including non-bearing fruit and nut), Shrubs Evergreens Flowers Ground covers Vegetable plants*	1.7 fl. oz. (50 mL) per 100 gal. of water	Foliar Applications: Start treatments before high pest pressure is observed and reapply as needed. For resistance management purposes, do not make a QUALI-PRO IMIDACLOPRID 2F foliar application following a soil application in the same crop. RESTRICTIONS <ul style="list-style-type: none"> For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.
White grub larvae (such as Japanese beetle larvae, Chafers, <i>Phyllophaga</i> spp., Asiatic garden beetle, Oriental beetle)		0.45 to 0.6 fl. oz. (13 to 17 mL) per 1,000 sq. ft.	Broadcast Applications: Mix required amount of product in enough water to uniformly and exactly cover the treatment area. Do not use less than 2 gallons of water per 1000 sq. ft. Irrigate to integrate QUALI-PRO IMIDACLOPRID 2F into the upper soil level. Refer to REMARKS section for use directions specific for FLOWERS AND GROUND COVERS concerning additional use directions. RESTRICTION: Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

SOIL INJECTION, SOIL DRENCH AND BROADCAST APPLICATIONS IN NURSERY AND GREENHOUSE

PEST	CROP/RATES	APPLICATION INSTRUCTION
<p>Adelgids Aphids Armored scales Black vine weevil larvae Eucalyptus longhorned borers Flatheaded borers (including bronze birch and alder borers) Japanese beetles (adults) Lacebugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafminers Mealybugs Pine Tip moth larvae Psyllids Royal palm bugs Sawfly larvae Soft scales Thrips (suppression) White grub larvae Whiteflies</p>	<p>TREES Apply 0.1 to 0.2 fl oz (3 to 6 mL) per inch of trunk diameter. Diameter at Breast Height (D.B.H.) = is measured at 4.5 feet from the ground.</p>	<p>Soil Injections: Grid System: Space holes on 2.5 foot centers, in a grid pattern, extending to the drip line of the tree. Circle System: Apply in holes evenly spaced in circles, (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line. Basal System: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base. Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per tree. Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone. For Control of Specified Borers: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress. RESTRICTIONS <ul style="list-style-type: none"> • No Soil Injection Application Allowed in Nassau or Suffolk Counties of New York. • Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year. </p>
	<p>SHRUBS 0.1 to 0.2 fl. oz. (13 to 17 mL) per foot of shrub height</p>	<p>Soil Injection: Apply to individual plants using dosage indicated. Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per shrub. Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1,000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone. RESTRICTIONS <ul style="list-style-type: none"> • No Soil Injection Application Allowed in Nassau or Suffolk Counties of New York. • Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year. </p>
	<p>FLOWERS AND GROUND COVERS 0.45 to 0.6 fl. oz. (13 to 17 mL) per 1,000 sq. ft.</p>	<p>Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. After application to established plants, irrigate thoroughly. RESTRICTION: Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.</p>

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EBB & FLOOD APPLICATION

Prior to treatment, to ensure accurate uptake by the plants, at least 10 plants must be brought up to a known field capacity and allowed to dry out for one or two days. Once dry, re-wet these plants to determine how much water on average each plant will absorb to bring it back at field capacity. Use the volume absorbed per plant (keeping pot sizes uniform) multiplied by the number of pots being treated. Add to this volume a required minimum to flood your smallest treatment area. This should minimize the return back to the storage tank. Re-use the returned volume with subsequent irrigation or nutrients on the same plants.

PEST	POT SIZE (inches)	Herbaceous species including vegetable plants* (1 or 2 plants per pot)	Woody perennials, Herbaceous species including vegetable plants* (3 or more plants per pot)	APPLICATION INTRUCTIONS
		ML per 100 Plants	ML per 100 Plants	
Adelgids	2	1.6 mL	2.5 mL	<p>¹ Fungus gnat larvae: Control in the soil by drench or incorporation. QUALI-PRO IMIDACLOPRID 2F will not control adult Fungus Gnats.</p> <p>² Root Mealybug: To obtain control, thoroughly drench the containerized media but do not allow leaching from the bottom of the container. Use the following rate of 1.7 fl oz (50 mL) in 150 gallons of water.</p> <p>³ Citrus Root Weevil: For use on non-bearing citrus nursery stock.</p> <p>⁴ Thrips: For suppression on foliage only. Thrips in buds and flowers will not be suppressed.</p> <p>Foliar insect control is accomplished by the uptake of QUALI-PRO IMIDACLOPRID 2F from a healthy root system. This allows the active ingredient to move up into the plant.</p> <p>RESTRICTIONS</p> <ul style="list-style-type: none"> For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato. Do not apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.
Aphids				
Armored scales	3	2.5 mL	3.7 mL	
Fungus Gnats (larvae only) ¹				
Japanese beetles (adults)	4	3.3 mL	5 mL	
Lacebugs	5	4.2 mL	6.3 mL	
Leaf beetles (including elm and viburnum leaf beetles)	6	5 mL	7.7 mL	
Leafhoppers (including glassy-winged sharpshooter)	7	5.9 mL	9.1 mL	
Leafminers	8	6.6 mL	10 mL	
Mealybugs				
Psyllids	9	7.4 mL	11.1 mL	
Root mealybugs ²				
Root Weevil Complex (such as Apopka Weevil, Black Vine Weevil, Citrus Weevil ³)	10	8.3 mL	12.5 mL	
Soft scales	11	9 mL	14.3 mL	
Thrips (suppression) ⁴				
Whiteflies	12	10 mL	16.7 mL	
White grub larvae (such as Japanese Beetle, Masked Chafer, European Chafer, Oriental Beetle, Asiatic Garden Beetle)				

DRENCH AND IRRIGATION APPLICATIONS

For use only on greenhouse and nursery ornamentals, vegetable plants*, and interiorscape plants using soil drenches, micro irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized

calibrated irrigation equipment.

PEST	POT SIZE (inches)	Herbaceous species including vegetable plants* (1 or 2 plants per pot)	Woody perennials, Herbaceous species including vegetable plants* (3 or more plants per pot)	APPLICATION INTRUCTIONS
		No. pots treated with 1.7 fl. oz. (50 mL)	No. pots treated with 1.7 fl. oz. (50 mL)	
Adelgids	2	3,000	2,000	<p>Thoroughly wet most of the potting medium but do not allow runoff or leaching from the bottom of the container.</p> <p>Follow the application with moderate irrigation.</p> <p>During the next 10 days, carefully irrigate to avoid the loss of the active ingredient due to leaching.</p> <p>¹ Fungus gnat larvae: Control in the soil by drench or incorporation. QUALI-PRO IMIDACLOPRID 2F will not control adult Fungus Gnats.</p> <p>² Root Mealybug: To obtain control, thoroughly drench the containerized media but do not allow leaching from the bottom of the container. Use the following rate of 1.7 fl oz (50 mL) in 150 gallons of water.</p> <p>³ Citrus Root Weevil: For use on non-bearing citrus nursery stock.</p> <p>⁴ Thrips: For suppression on foliage only. Thrips in buds and flowers will not be suppressed.</p> <p>Foliar insect control is accomplished by the uptake of QUALI-PRO IMIDACLOPRID 2F from a healthy root system. This allows the active ingredient to move up into the plant.</p>
Aphids				
Fungus Gnats (larvae only) ¹	3	2,000	1,350	
Japanese beetles (adults)	4	1,500	1,000	
Lacebugs	5	1,200	800	
Leaf beetles (including elm and viburnum leaf beetles)	6	1,000	650	
Leafhoppers (including glassy-winged sharpshooter)	7	850	550	
Leafminers	8	750	500	
Mealybugs	9	675	450	
Psyllids	10	600	400	
Root mealybugs ²				
Root Weevil Complex (such as Apopka Weevil, Black Vine Weevil, Citrus Weevil ³)	11	550	350	
Soft scales	12	500	300	
Thrips (suppression) ⁴				
Whiteflies				
White grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)				
	Ornamental and vegetable plants* grown in flats, benches, or beds		1.7 fl. oz. (50 mL) per 3,000 sq. ft.	<p>Mix the appropriate amount of QUALI-PRO IMIDACLOPRID 2F in sufficient water to evenly cover the treatment area.</p> <p>RESTRICTION: Do not use less than 2 gallons of mixture per 1000 sq. ft.</p> <p>Apply as a broadcast treatment. Before planting, mix into the potting medium or apply after to established plants. Lightly irrigate after application to established plants for best control.</p> <p>RESTRICTION: Do not allow leaching or runoff for 10 days after application.</p>
<p>RESTRICTION: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.</p>				

DRENCH AND IRRIGATION APPLICATIONS (cont'd)

PEST	Containerized Plants		APPLICATION INTRUCTIONS	
	Container Size	No. pots treated with 1.7 fl. oz. (50 mL)		
Adelgids	1 gallon	340 to 244	<p>Apply in sufficient water to wet the potting medium. For best control, make applications prior to egg hatch of the target pest. Irrigate moderately after application to move the active ingredient into the root zone.</p> <p>To prevent leaching, use 1.7 fl. oz. (50 mL) of QUALI-PRO IMIDACLOPRID 2F in the appropriate amount of water to treat the number of pots based on the pot size as stated in the table.</p> <p>Foliar insect control is accomplished by the uptake of QUALI-PRO IMIDACLOPRID 2F from a healthy root system. This allows the active ingredient to move up into the plant.</p> <p>¹ Fungus gnat larvae: Control in the soil by drench or incorporation. QUALI-PRO IMIDACLOPRID 2F will not control adult Fungus Gnats.</p> <p>² Root Mealybug: To obtain control, thoroughly drench the containerized media but do not allow leaching from the bottom of the container. Use the following rate of 1.7 fl oz (50 mL) in 150 gallons of water.</p> <p>³ Citrus Root Weevil: For use on non-bearing citrus nursery stock.</p> <p>⁴ Thrips: For suppression on foliage only. Thrips in buds and flowers will not be suppressed.</p>	
Aphids				
Fungus Gnats (larvae only) ¹	2 gallon	280 to 210		
Japanese beetles (adults)	3 gallon	220 to 165		
Lacebugs	5 gallon	160 to 110		
Leaf beetles (including elm and viburnum leaf beetles)	7 gallon	100 to 75		
Leafhoppers (including glassy-winged sharpshooter)	10 gallon	60 to 45		
Leafminers	15 gallon	40 to 30		
Mealybugs	20 gallon	20 to 15		
Psyllids				
Root mealybugs ²				
Root Weevil Complex (such as Apopka Weevil, Black Vine Weevil, Citrus Weevil) ³				
Soft scales				
Thrips (suppression) ⁴				
Whiteflies				
White grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)				
Field and Forest Nurseries				
White grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)	1.7 fl. oz. (50 mL) per 1,000 ft. of row or 3,000 sq. ft.			<p>Before application, mow the vegetation in the treatment area to a height of 3 inches or less. Mow to the lowest height possible.</p> <p>Applications must be made May through July. Treatment must be followed by rainfall or irrigation. Do not use less than 2 gallons of spray volume per 1000 square feet.</p> <p>Apply as a uniform band on either side of the row using a band width six (6) inches wider than the actual root ball diameter to be dug. Do not overlap bands in adjacent rows.</p> <p>For grub control in areas of turf, apply as a broadcast application using 1.35 to 1.7 fl oz (40 to 50 mL) per 3000 sq. ft.</p>

RESTRICTIONS

Do not graze treated areas or use clippings for treated areas for feed or forage. Do not allow runoff or puddling of irrigation water following application.

Do not apply QUALI-PRO IMIDACLOPRID 2F to soils which are water logged or saturated, which will not allow penetration into the root zone of the plants.

Do not allow leachate run out for the first 10 days after application, in order to retain the product and facilitate full plant uptake of the active ingredient.

For outdoor ornamentals, applications of any imidacloprid product cannot exceed a total of 1.6 pt (0.4 lb of active ingredient) per acre per year.

Food Crops: Treated areas may be replanted with any crop specified on an imidacloprid label, or with any crop for which a tolerance exists for the active ingredient.

For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12 month plant-back interval must be observed.

STORAGE AND DISPOSAL

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

STORAGE AND SPILL PROCEDURES: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available, or puncture and dispose of in a sanitary landfill or incineration if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (greater than five 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 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available, or puncture and dispose of in a sanitary landfill or incineration if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

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 Makhteshim Agan of North America, Inc.'s election, the replacement of product.

Quali-Pro Imidacloprid 2F (66222-203) (EPA Approved 11-24-2010) (Master Label Amendment to EPA 12-15-10)
(Additional Changes Requested by EPA 03-10-11)

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Sublabel B: Agricultural Uses Quali-Pro Imidacloprid 2F

[Alternate Brand Name: MANA Alias 2F Flowable Insecticide]

ACTIVE INGREDIENT	% BY WT.
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	21.8%
OTHER INGREDIENTS:	<u>78.2%</u>
	TOTAL 100.0%

Contains 2 lbs. of imidacloprid per gallon.
Shake well before using.

Contains imidacloprid, the active ingredient in Admire 2 Flowable Insecticide.
MANA Alias 2F Flowable Insecticide is not manufactured or distributed by Bayer.

KEEP OUT OF REACH OF CHILDREN CAUTION

Manufactured for:
Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Rd., Suite 300
Raleigh, NC 27609

EPA Reg. No. 66222-203

EPA Est. No. XXXXXXXXXX

NET CONTENTS: _____ GALLON

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • 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 by mouth to an unconscious person.
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 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 soap and water for 15 to 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 to 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: In case of emergency, contact PROSAR at 1-877-250-9291. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
NOTE TO PHYSICIAN: No specific antidote is available. Treat the patient symptomatically.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (mixers and loaders) who handle this product for uses covered by the Worker Protection Standard (40 CFR Part 170) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC), or Viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

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

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.
- Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Apply this product only as specified on this label. Extreme care must be taken to avoid runoff. Apply only to soil or other fill substrate that will accept the solution at the specified rate. Do not treat soil that is water-saturated or frozen or in any conditions where run-off or movement from the treated area (site) is likely to occur.

SPRAY DRIFT MANAGEMENT

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

For Aerial Applications

For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or rotor diameter. Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the airstream as much as possible and by avoiding excessive spray boom pressure.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy, and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions during Temperature Inversions

Do not make aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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. 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 mixing.

Mixing and Loading Requirements

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

Airblast (Air Assist) Specific Recommendations for Tree Crops and Vineyards

Airblast sprayers carry droplets into the canopy of trees/vines via a radially or laterally directed air stream. The following specific drift management practices should be followed:

- Adjust 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 the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows).
- Only spray inward, toward the orchard or vineyard, for application to the outside rows.

No-Spray Zone Requirements for Soil and Foliar Applications

Do not apply by ground within 25 feet or by air within 150 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using MANA Alias 2F on erodible soils, Best Management Practice for minimizing runoff should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a federal offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

Resistance Management

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

MANA Alias[®] 2F contains a Group 4A insecticide. Insect biotypes with acquired or inherent tolerance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by MANA Alias 2F and to other Group 4A insecticides.

The active ingredient in MANA Alias 2F is a member of the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to MANA Alias 2F. In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential, for each crop season: 1) make only a single, soil application of MANA Alias 2F; 2) foliar applications of products from the same class not be made following a long residual, soil application of MANA Alias 2F, or other neonicotinoid products.

If a soil application of MANA Alias 2F has not been made during a crop season and foliar applications are to be made, avoid using a block of more than three consecutive applications of MANA Alias 2F and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, MANA strongly encourages the rotation to a block of applications with effective products with a different mode of action before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect's ability to develop resistance to this class of chemistry.

Other Group 4A, neonicotinoid products, used as foliar treatments include: Actara, Assail, Calypso, Centric, Clutch, Couraze, Galiant, Impulse, Intruder, Leverage, Nuprid, Pasada, Provado, Trimax Pro, and Venom.

Other Group 4A, neonicotinoid products, used as soil/seed treatments include Admire Pro, Advise, Alias, Belay, Couraze, Cruiser, Gaucho, Macho, Macho Max, Nuprid, Platinum, Venom, and Widow.

Contact your Cooperative Extension specialist, certified crop advisor, and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org/>.

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 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 intervals. 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.

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC), or Viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

APPLICATION DIRECTIONS

For soil applications of MANA Alias 2F, direct product into the seed or root zone of crop. Failure to place MANA Alias 2F into root-zone may result in loss of control or delay in onset of activity. Apply MANA Alias 2F with ground or chemigation application equipment. **RESTRICTION:** Do not apply with aerial application equipment.

Make broadcast foliar applications to seedling flats or trays or where product is intended to be washed from foliage to soil prior to drying on foliage.

RESTRICTION: Do not apply MANA Alias 2F in enclosed structures such as planthouses or greenhouses except as specifically instructed in the **TOBACCO, CUCURBIT VEGETABLES, FRUITING VEGETABLES and GREENHOUSE VEGETABLES**, (Mature plants in production greenhouses): Cucumber, Tomato only sections of this label.

When applied as a soil application, optimum activity of MANA Alias 2F results from applications to the root-zone of plants to be protected. The earlier MANA Alias 2F is available to a developing plant, the earlier the protection begins. MANA Alias 2F is continuously taken into the roots over a long period of time and the systemic nature of MANA Alias 2F allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of MANA Alias 2F, the control of insects, and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of MANA Alias 2F applied affects the length of the plant protection period. Use the higher listed rates when infestations occur later in crop development or where pest pressure is continuous. MANA Alias 2F will generally not control insects infesting flowers, blooms, or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts, and for insects not listed in the crop-specific, pests-controlled sections of this label. Additionally, specific MANA Alias 2F application instructions are also provided in the crop-specific sections of this label.

Suppression, or less than complete control of certain diseases and insect pests including reduced feeding, may also result from a MANA Alias 2F application. Complete control of these pests may require supplemental control measures.

Application of MANA Alias 2F is not allowed on crops grown for production of true seed intended for private or commercial planting but may be allowed under state specific, supplemental labeling. As with any insecticide, minimize exposure of MANA Alias 2F to honey bees and other pollinators. Do not use MANA Alias 2F on crops requiring bee pollination during bloom and a minimum of 10 days prior to bloom. Additional information on MANA Alias 2F uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants, or local Makhteshim Agan of North America, Inc. representatives.

Apply only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil media such as perlite, vermiculite, rock wool, or other soilless media, or plants growing hydroponically.

Pre-mix MANA Alias 2F with water or other appropriate diluent prior to application. Keep MANA Alias 2F and water suspension agitated to avoid settling.

RESTRICTION: Do not apply more than 0.5 lb. active ingredient per acre per year regardless of formulation or method of application.

MIXING INSTRUCTIONS

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation, add MANA Alias 2F. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. MANA Alias 2F may also be used with other pesticides. Please see **Compatibility** section of this label. When tank mixtures of MANA Alias 2F and other pesticides are involved, prepare the tank mixture as instructed above and follow suggested **Mixing Order** below.

Mixing Order

When pesticide mixtures are needed, add wettable powders or wettable granules first, MANA Alias 2F and other suspension concentrate (flowable) products second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility

Test compatibility of the intended mixture before adding MANA Alias 2F to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Do not use if poor mixing or formation of precipitates that do not readily redisperse occurs which indicates an incompatible mixture.

CHEMIGATION

Types of Irrigation Systems: Make soil chemigation applications of MANA Alias 2F only to crops through chemigation as specified in crop-specific application sections and only through low-pressure systems unless specifically listed for a given crop. Do not apply MANA Alias 2F through any other type of irrigation system.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact Cooperative Extension Service specialists, equipment manufacturers, or other experts.

Chemigation Monitoring: A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Drift: Do not apply when wind speed favors drift beyond the area intended for treatment.

Required System Safety Devices: The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to

automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems: Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, back flow preventer (RPZ), or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

ROTATIONAL CROPS*

Replant treated areas with any crop specified on an imidacloprid label or any crop for which a tolerance exists for the active ingredient as soon as practical following the last application. For crops not listed on an imidacloprid label or for crops for which no tolerances for the active ingredient have been established a 12-month plant-back interval must be observed.
IMMEDIATE PLANT-BACK: All crops on this label plus the following crops not on this label: barley, canola, corn (field, pop, and sweet), rapeseed, sorghum, soybeans, sugarbeet, and wheat.
30-DAY PLANT-BACK: Cereals (including buckwheat, millet, oats, rice, rye, and triticale), and safflower
10-MONTH PLANT-BACK: Onion and bulb vegetables
12-MONTH PLANT-BACK: All Other Crops

*Plant cover crops for soil building or erosion control at any time, but do not graze or harvest for food or feed.

FIELD CROPS

COTTON

Pests Controlled	Rate: Fluid ounces per 1000 row-feet	Rate: Fluid ounces per acre
Cotton aphid Plant bugs Thrips Whiteflies	1.3	17-21.1 (depending on row-spacing)
<p>Restrictions:</p> <ul style="list-style-type: none"> • Maximum MANA Alias 2F allowed per crop season: 21.1 fluid ounces per acre (0.33 lb active ingredient per acre). • Regardless of formulation or method of application, apply no more than 0.5 lb. active ingredient per acre per year, including seed treatment, soil, and foliar uses. • Do not apply more than a total of 6 applications of the active ingredient per season. • Do not graze treated fields after any application of MANA Alias 2F. See RESISTANCE MANAGEMENT section of this label. <p>Applications: Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • In-furrow spray during planting directed on or below seed. • In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. • Chemigation into root-zone through low-pressure drip or trickle irrigation. 		

PEANUT¹

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers Whiteflies	16-24
Pest Suppressed	
Thrips	16-24
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 14 days • Maximum MANA Alias 2F allowed per season: 24 fluid ounces/Acre (0.38 ai/Acre) <p>Applications: Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • In-furrow spray during planting directed on or below seed; • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. <p>¹Not for use in CA unless otherwise directed by supplemental labeling.</p> <p>Important Note: Increases in Tomato spotted wilt virus (TSWV) incidence have been observed with applications of MANA Alias 2F on multiple varieties of peanut. This may also be the case with other tospoviruses, or other viruses transmitted by various thrips species or perhaps other pests. Prior to applying MANA Alias 2F to peanuts, consult with the State, Cooperative Extension Service, or a Makhteshim Agan of North America, Inc. representative, for recommendations. Growers are advised to weigh insect control benefits against potential increase in viral disease levels. In areas where TSWV or other tospovirus are endemic, growers are encouraged to use virus resistant varieties and consult the University of Georgia, Tomato spotted wilt virus index, before applying MANA Alias 2F.</p>	

POTATO

Pests Controlled	Rate: Fluid ounces per 1000 row-feet	Rate: Fluid ounces per acre
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid	0.9-1.3	13-20
Pests/Diseases Suppressed		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis	0.9-1.3	13-20

Wireworms (with in-furrow spray at-planting)		
Restrictions: <ul style="list-style-type: none"> Maximum MANA Alias 2F allowed per crop season: 20 fluid ounces per acre (0.31 lb active ingredient per acre) Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> In-furrow spray during planting directed on seed pieces or seed potatoes. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil. Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, MANA Alias 2F applications must be placed below soil surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, make at-plant applications of MANA Alias 2F in a 2 to 4 inch band (width of planter shoe opening) and completely cover. 		

POTATO – seed piece treatment

Pests Controlled	Rate: Fluid ounces per 100 lbs. of seed	Rate: Fluid ounces per acre*
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid Wireworms (seed-piece protection)	0.4-0.8	8-16
Pests/Diseases Suppressed		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis	0.8	16

Restrictions:

- Maximum MANA Alias 2F allowed per crop season when making seed piece treatment applications: 20 fluid ounces per acre (0.31 lb. active ingredient per acre)
- Do not use treated seed-pieces for food, feed, or fodder.
- Do not apply any subsequent application of MANA Alias 2F (in-furrow), or any other imidacloprid product, following a MANA Alias 2F seed-piece treatment.

Application: Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part MANA Alias 2F. Agitate or stir spray solution as needed. Apply fungicidal or inert absorbent dusts after MANA Alias 2F application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating, avoiding prolonged exposure of MANA Alias 2F treated seed-pieces to sunlight and in accordance with the recommendation of your local Extension service.

* Based on a seeding rate of 2000 lbs. per acre.

TOBACCO

Pests Controlled	Rate: Fluid ounces per 1000 plants (as seedling tray drench)	Rate: Fluid ounces per 1000 plants (in-furrow or transplant-water)
Aphids Flea beetles	1.0	1.4
Mole crickets Whiteflies Wireworms	1.4-2.8	1.8-2.8
Pests/Disease Suppressed		
Cutworms Symptoms of: Tomato spotted wilt virus (TSWV)	1.4-2.8	1.8-2.8

Restrictions:

- Maximum MANA Alias 2F allowed per crop season: 32 fluid ounces per acre (0.5 lb. active ingredient per acre)
- Pre-Harvest Interval (PHI): 14 days

Applications: Apply specified dosage in one of the following methods:

- Uniform, broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash MANA Alias 2F from foliage into potting media. Failure to wash MANA Alias 2F from foliage may result in a reduction in pest control. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.
- In-furrow spray or transplant-water drench during setting.
- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.

Important Note: Proper tray drench applications of MANA Alias 2F have been shown to be the most efficacious method of application. However, apply the specified rate of MANA Alias 2F as a combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of MANA Alias 2F into the plant and a delay in control.

VEGETABLE AND SMALL FRUIT CROPS

CUCURBIT VEGETABLES¹ – soil treatment

Crops of Crop Group 9 Including: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

Field Applications. See details below for additional planthouse application instructions.

Pests Controlled	Rate: Fluid ounces per acre
Aphids Cucumber beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	16-24
Pests/ Diseases Suppressed	
Bacterial wilt (as vectored by various cucumber beetles) Leaf silvering resulting from whitefly feeding	16-24

Restrictions:

- Pre-Harvest Interval (PHI): 21days
- Maximum MANA Alias 2F allowed per application: 24 fluid ounces per acre (0.38 lb/active ingredient per acre)

¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

Applications: Apply the specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray directed on or below seed.
- Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application.
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
- Post-seeding drench, transplant-water drench, or hill drench.
- Subsurface side-dress on both sides of each row. MANA Alias 2F must be incorporated into root-zone.

CUCURBIT VEGETABLES¹ (continued)

Planthouse Applications	
Pest Controlled	Rate: Fluid ounces per 1000 plants
Aphids Whiteflies	0.1
<p>Restrictions:</p> <ul style="list-style-type: none"> • Maximum amount MANA Alias 2F applied in the planthouse: 0.1 fluid ounces (0.00156 lb. active ingredient per 1000 plants) • Maximum number MANA Alias 2F applications in planthouse: 1 <p>¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.</p> <p>Applications: Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following methods:</p> <ul style="list-style-type: none"> • Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash MANA Alias 2F from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash MANA Alias 2F from foliage may result in reduced pest control. • Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray. <p>The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.</p> <p>Important Note: Not all varieties of cucurbit vegetables have been tested for tolerance to MANA Alias 2F applied to seedling flats. Treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.</p>	

GREENHOUSE VEGETABLES¹

Mature plants in production greenhouses: Cucumber, Tomato only

Pests Controlled	Rate: Fluid ounces per 1000 plants
Aphids Whiteflies	1.4
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 0 day • Maximum number MANA Alias 2F applications per crop season: 1 <p>¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.</p> <p>Applications: Apply specified dosage in a minimum of 16 gallons of water for tomatoes and 21 gallons of water for cucumbers using soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment. Make applications only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil medias such as perlite, vermiculite, rock wool or other soilless media, or plants growing hydroponically. Do not apply to immature plants since phytotoxicity may occur. Make applications when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficials (<i>Orius</i> spp.) can occur when MANA Alias 2F is applied. Many varieties of vegetables have been tested for tolerance to MANA Alias 2F and show good safety. However, certain varieties may show more sensitivity to MANA Alias 2F. Therefore, treat a few plants before treating the whole greenhouse.</p>	

FRUITING VEGETABLES¹

Crops of Crop Group 8 plus Okra including: Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento, and sweet), Tomato, Pepinos, Tomatillo

Field Applications. See details below for additional planthouse applications.	
Pests Controlled	Rate: Fluid ounces per Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	Okra and Pepper: 16-32 Other Crops: 16-24
Diseases Suppressed	Rate: Fluid ounces per Acre
Symptoms of: Tomato mottle virus Tomato spotted wilt virus Tomato yellow leaf curl virus	Okra and Pepper: 16-32 Other Crops: 16-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed on pepper and okra crops per application: 32 fluid ounces/Acre (0.5 lb A.I. per acre) • Maximum MANA Alias 2F allowed on other fruiting vegetable crops per application: 24 fluid ounces/Acre (0.38 lb AI/ per acre) ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	
Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray directed on or below seed. • Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application. • Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting. • Post-seeding drench, transplant-water drench, or hill drench. • Subsurface side-dress on both sides of each row. Incorporate MANA Alias 2F into root-zone. 	

FRUITING VEGETABLES¹ (continued)

Planthouse Applications	
Pests Controlled	Rate: Fluid ounces per 1000 plants
Aphids Whiteflies	0.1
Restrictions: <ul style="list-style-type: none"> • Maximum amount MANA Alias 2F applied in the planthouse: 0.1 fluid ounces (0.00156 lb A.I.) per 1000 plants. • Maximum number MANA Alias 2F applications in planthouse: 1 ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	
Applications: Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners: <ul style="list-style-type: none"> • Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash MANA Alias 2F from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash MANA Alias 2F from foliage may result in reduced pest control. • Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray. <p>The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.</p> <p>Important Note: Not all varieties of fruiting vegetables have been tested for tolerance to MANA Alias 2F applied to seedling flats. Treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.</p>	

GLOBE ARTICHOKE

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers	16-32
Restrictions:	
<ul style="list-style-type: none"> Pre-harvest interval (PHI): 7 days Maximum MANA Alias 2F allowed per crop season when making soil applications: 32 fluid ounces per acre (0.5 lb AI per acre) 	
Applications: Apply specified dosage in the following method:	
<ul style="list-style-type: none"> In-furrow spray at planting directed on or below seed. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

HERBS

Crops of Crop Subgroup 19A including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

Pests Controlled	Rate: Fluid ounces per acre
Aphids Flea beetles Leafhoppers Whiteflies	16-24
Pests Suppressed	
Thrips (foliage feeding thrips only)	16-24
Restrictions:	
<ul style="list-style-type: none"> Pre-Harvest Interval (PHI): 14 days Maximum MANA Alias 2F per season: 24 fluid ounces/Acre (0.38 lb AI/Acre). 	
Applications: Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> In-furrow spray during planting directed on or below seed. In-furrow spray or transplant-water drench during setting or transplanting. Shanked-into or below eventual seed-line. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. 	
Notes: Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, treat only a small area or small number of plants of each listed above and evaluate prior to commercial use.	

BRASSICA (COLE) LEAFY VEGETABLES¹

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lon*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip tops (leaves)

Pests Controlled	Rate: Fluid ounces per acre (on 36 inch rows)
Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies	10-24
Restrictions:	
<ul style="list-style-type: none"> Pre-Harvest Interval (PHI): 21 days Maximum MANA Alias 2F allowed per application when making soil applications 24 fluid ounces/Acre (0.38 lb AI per acre) 	
¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	
Applications: Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. In-furrow spray directed on or below seed. Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting. Post-seeding drench, transplant-water drench, or hill drench. Subsurface side-dress on both sides of each row. MANA Alias 2F must be incorporated into root-zone. 	

LEAFY VEGETABLES¹

Crops of Crop Subgroup 4A plus Watercress including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate: Fluid ounces per acre (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10-24
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed per application: 24 fluid ounces per acre (0.38 lb AI per Acre) <p>¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.</p> <p>Applications: Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray directed on or below seed. • Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application. • Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting. • Post-seeding drench, transplant-water drench, or hill drench. • Subsurface side-dress on both sides of each row. MANA Alias 2F must be incorporated into root-zone. 	

LEAFY PETIOLE VEGETABLES¹

Crops of Crop Subgroup 4B including: Cardoon, Celery, Celtuce, Chinese celery (fresh leaves and stalk only), Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10-24
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 45 days • Maximum MANA Alias 2F allowed per application: 24 fluid ounces/Acre (0.38 lb AI per acre) <p>¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.</p> <p>Applications: Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray directed on or below seed. • Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application. • Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting. • Post-seeding drench, transplant-water drench, or hill drench. • Subsurface side-dress on both sides of each row. MANA Alias 2F must be incorporated into root-zone. 	

LEGUME VEGETABLES¹ except soybean, dry

Crops of Crop Group 6 including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna* spp., includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other Beans and Peas [Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean]

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	16-24
Diseases Suppressed	
Symptoms of: Bean common mosaic virus (BCMV) Bean golden mosaic virus (BGMV) Beet curly top hybrigeminivirus (BCTV)	16-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed per crop season: 24 fluid ounces/Acre (0.38 lb AI per acre) ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling. Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray at planting directed on or below seed. • In a narrow (2 inches or less) surface band over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours following application. • In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. • As a post-seeding drench, transplant drench, or hill drench. 	

ROOT VEGETABLES¹

Crops of Crop Subgroup 1B except Sugarbeet plus Kava including: Beet (garden)², Burdock (edible)², Carrot², Celeriac², Chervil (turnip-rooted)², Chicory², Ginseng, Horseradish, Kava², Parsley (turnip-rooted), Parsnip², Radish², Oriental radish (diakon)², Rutabaga², Salsify (oyster plant), Salsify (black)², Salsify (Spanish), Skirret, and Turnip²

Pests Controlled	Rate: Fluid ounces per 1000 row-feet	Rate: Fluid ounces per acre
Aphids Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	0.7-1.7	10-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed per crop season: 24 fluid ounces/Acre (0.38 lb AI per acre) • Maximum MANA Alias 2F applications per crop season: 1 ¹ Not for use on crops grown for seed unless allowed by a state-specific supplemental labeling. ² Tops or greens from these crops may be utilized for food or feed. Application: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray (rate specified per 1000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting. • In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting. Important Note: The rate applied affects the length of control. Use the higher listed rates where infestations occur later in crop development, or where pest pressure is continuous. MANA Alias 2F rates less than 0.7 fluid ounces/1000 row-feet will not provide adequate residual pest control. MANA Alias 2F treated crops grown on very high organic matter soils (muck) may also require additional pest management control.		

TUBEROUS and CORM VEGETABLES¹

Crops of Crop Subgroup 1C including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Cassava (bitter and sweet)², Chayote (root), Chufa, Dasheen (taro)², Ginger, Leren, Sweet potato, Tanier (cocoyam)², Turmeric, Yam bean (jicama, manioc pea), Yam (true)² (For applications on potato see **FIELD CROPS** section)

Pests Controlled	Rate: Fluid ounces per 1000 row-	Rate: Fluid ounces per acre
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	feet	
Aphids Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	0.7-1.7	10-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms) • Maximum MANA Alias 2F allowed per crop season: 24 fluid ounces/Acre (0.38 lb AI per acre) • Maximum MANA Alias 2F applications per crop season: 1 ¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling. ² Tops or greens from these crops may be utilized for food or feed.		
Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • In-furrow spray (rate specified per 1000 row-feet) over planting materials (hulis) or shanked-in 1 to 2 inches below hulis depth at planting. • Side-dress not more than 0.6 fluid ounces/1000 row-feet no later than 45 days after planting. Observe the same PHI as above. 		
Important Note: The rate applied affects the length of control. Use the higher listed rates where infestations occur late in crop development, or where pest pressure is continuous. MANA Alias 2F rates less than 0.7 fluid ounces/1000 row-feet may not provide adequate residual pest control. MANA Alias 2F treated crops grown on very high organic matter soils (muck) may also require additional pest management control.		

STRAWBERRY¹

Annual and Perennial Crops		
Pests Controlled	Rate: Fluid ounces per acre	
Aphids Whiteflies	24-32	
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 14 days • Maximum MANA Alias 2F allowed per crop season: 32 fluid ounces/Acre (0.50 lb AI per acre) ¹ Do not use both application methods on the same crop in the same season.		
Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening. • As a plant material or plant hole treatment just prior to, or during transplanting. • As a band spray over-the-row in a minimum of 20 gallons of water per acre, followed immediately by overhead irrigation to incorporate product into root-zone. Do not use plastic or other mulches that limit movement of MANA Alias 2F into root zone. 		
The rate applied affects the length of control. Use the higher listed rates where infestations occur later in crop development or where pest pressure is continuous.		
Post-harvest Use on Perennial Crops		
Pests Controlled	Rate fluid ounces per acre	
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	16-24	
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 14 days • Maximum MANA Alias 2F allowed per season: 24 fluid ounces per acre (0.38 lb A.I. per acre) ¹ Do not use both application methods on the same crop in the same season.		
Applications: Apply a single application post harvest to coincide with renovation of strawberry fields and during active egg-laying period of beetles. Apply specified dosage of MANA Alias 2F in one of the following methods: <ul style="list-style-type: none"> • As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water per acre. • As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The bandwidth should be equivalent to the width of the anticipated fruiting bed. • As a chemigation application with 600 to 1000 gallons of water followed by 0.1 to 0.25 inches irrigation. 		
Important Note: Follow all soil-surface applications with 0.25 inches of rainfall or overhead irrigation water per		

acre within 2 hours of application. Failure to adequately incorporate MANA Alias 2F into egg-deposition zone may result in decreased activity.

SUGARBEET¹ – For use only in CA

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers Whiteflies Flea beetles	6.0-12.0
Diseases Suppressed	
Symptoms of: Western yellows/Beet curly top hybrigeminivirus (BCTV)	6.0-12.0
Restrictions:	
<ul style="list-style-type: none"> • Maximum MANA Alias 2F allowed per crop season: 12.0 fluid ounces/Acre (0.18 lb AI per acre) • Do not apply immediately prior to bud opening or during bloom or when bees are actively foraging. 	
¹ Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	
Applications: Apply specified dosage in the following method:	
<ul style="list-style-type: none"> • Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting. 	
Apply the low rate to aid establishment of stands in whitefly areas, or for early season control of the other pests listed.	

Rate: Fluid Ounces/Acre	INSECTICIDE CONVERSION CHART FOR LINEAR APPLICATION							
	Rate: Fluid ounces/1000 row-feet							
	Based on average row spacing (in inches):							
	10	15	20	24	30	36	40	48
6	0.115	0.17	0.23	0.28	0.34	0.41	0.46	0.55
8	0.15	0.23	0.31	0.37	0.46	0.55	0.61	0.73
10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
12	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
14	0.27	0.40	0.54	0.67	0.80	0.94	1.07	1.21
16	0.31	0.46	0.61	0.77	0.92	1.07	1.22	1.68
18	0.34	0.52	0.69	0.86	1.03	1.21	1.38	1.55
20	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72
22	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89
24	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
26	0.50	0.75	0.99	1.24	1.49	1.74	1.99	2.24
28	0.54	0.80	1.07	1.34	1.61	1.87	2.14	2.41
30	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58
32	0.61	0.92	1.22	1.52	1.84	2.14	2.45	2.75

TREE, BUSH, and VINE CROPS

BANANA and PLANTAIN

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers	16-32
Pests Suppressed	
Scales	16-32
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 0 day • Maximum MANA Alias 2F allowed per crop season: 32 fluid ounces per Acre (0.5 lb AI per A) 	
Applications: Apply specified dosage in the following method:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

BUSHBERRY

Crops of Crop Subgroup 13B Including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

Pests Controlled	Rate: Fluid ounces per acre
Japanese beetle: (adults, feeding on foliage) White grub complex: (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)	16-32
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 7 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI per acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. 	
Applications: Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • 18-inch band on each side of the row followed by irrigation immediately after application. 	
For optimal grub control, apply MANA Alias 2F to control 1 st or 2 nd instar larvae. Make application post-bloom up to 7 days prior to harvest, or post-harvest until October 1 st . For optimum control of Japanese beetle larvae, make applications from June 1 to July 15.	
Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.	
Apply MANA Alias 2F to moist soil. If necessary, apply one hour of irrigation water immediately before application of MANA Alias 2F. To ensure maximum efficacy of soil surface spray, apply 1/2 to 1 inch of irrigation water or rainfall within 24 hours of application of MANA Alias 2F to facilitate movement into the soil and into the root-zone.	

CANEBERRY

Crops of Crop Subgroup 13A including:

Blackberry (*Rubus eubatus*, including bingleberry, black satin berry, boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, Lavacaberry, Loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these)

Raspberry (black and red, *Rubus occidentalis*, *Rubus strigosus*, *Rubus idaeus*)

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers Whiteflies	16-32
Rednecked cane borer	24-32
Pests Suppressed	
Thrips (foliage feeding thrips only)	16-32
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 7 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI per acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. 	
Soil Application: Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • Basal, soil drench in a minimum of 500 gallons solution per acre. 	

CITRUS (Containerized)

Crops of Crop Group 10 Including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, Tangelo, White sapote (*Casimiroa* spp), and other cultivars and/or hybrids of these.

Pests Controlled	Rate: ml/ft ³ container media
Aphid, Asian citrus psyllid, Blackfly, Citrus leafminer, Leafhoppers/Sharpshooters, Mealybugs, Scales, Whiteflies	0.75
Citrus root weevil (larval complex)	1.25 – 2.50

Pests Suppressed	Rate: ml/ ft ³ container media
Citrus thrips (foliage feeding thrips only)	2.5
Application: Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of MANA Alias 2F per container as a soil drench or through low-pressure drip or trickle irrigation water. Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container. For optimal results, make treatment at planting prior to insect infestation. Re-treat if necessary. For control of larvae of the citrus root weevil complex, make application prior to neonate larvae entering potting media. Utilize the higher listed dosage for heavy infestations.	

CITRUS (Field)

Crops of Crop Group 10 Including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, Tangelo, White sapote (*Casimiroa* spp.), and other cultivars and/or hybrids of these.

Pests Controlled	Rate: Fluid ounces per acre
Aphids Asian citrus psyllid Blackfly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Termites (FL only) Whiteflies	16-32
Pests/Diseases Suppressed	
Citrus nematode Symptoms of: Citrus tristeza virus (CTV) through vector control Citrus yellows Thrips (foliage feeding thrips only)	32

Restrictions:

- Pre-Harvest Interval (PHI): 0 day
- Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI per Acre)

Applications: Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. For optimum results, apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation. Lightly pre-wet soil to break soil surface tension prior to applications of MANA Alias 2F. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move MANA Alias 2F into root-zone. Allow 24 hours before initiating subsequent irrigations.
- Soil surface band spray on both sides of the tree. Overlap bands at the tree base to create a continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable for very coarse soils with 0.75% organic matter or less.
- Drench to base of tree not exceeding one-quart total solution per tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree. Use only on trees up to 8 feet tall.
- For control of existing termite infestations, apply specified dosage in 1 to 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk.
- For suppression of citrus nematode, apply specified dosage through low-pressure chemigation or soil surface band spray only, ensuring complete coverage of the root system and utilizing application directions stated above for the respective application method. Repeated and regular use of MANA Alias 2F over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

COFFEE

Pests Controlled	Rate: Fluid ounces per acre
Aphids, Leafhoppers, Leafminers	16-32
Pest Suppressed	Rate: Fluid ounces per acre

Scales	16-32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 7 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces per Acre (0.5 lb AI per acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • Subsurface side-dress shanked into the root-zone on both side of the plants followed by irrigation. • Basal, soil drench in sufficient water to insure incorporation into the root-zone followed by irrigation. 	

CRANBERRY

Pests Controlled	Rate: Fluid ounces per acre
Rootgrubs (<i>Scarabaeidae</i>) Rootworms (<i>Chrysomelidae</i>)	16-32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 30 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI/Acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply MANA Alias 2F to moist soil. Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal of water per acre. • As a chemigation application with 600 to 1000 gal water. Immediately upon application, incorporate MANA Alias 2F into root-zone by 0.1-0.3 inches water/Acre, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control. Rootgrubs and Rootworms Make application post-bloom immediately after bees are removed. Target applications to early instar larvae. MANA Alias 2F has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the MANA Alias 2F and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.	

GRAPE

Including: American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate: Fluid ounces per acre
European fruit lecanium Leafhoppers/Sharpshooters Mealybugs <i>Phylloxera</i> * spp	16-32
Pest/Disease Suppressed	
Grapeleaf skeletonizer Nematodes Pierce's disease	24-32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 30 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI/Acre) Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation. • Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation. • For suppression of nematodes, apply 32 fluid ounces in a single application or two 16 fluid ounce applications on a 30 to 45 day interval. Apply treatment(s) only by 1) chemigation into root-zone through above ground low-pressure drip, trickle, micro-sprinkler, or equivalent equipment; or 2) French plow technique, followed immediately by sufficient irrigation to move the product into the entire root-zone of the plant. Repeated and regular use of MANA Alias 2F over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response. For optimum results, make application(s) between bud-break and the pea-berry stage. Use a total of 32 fluid	

<p>ounces/Acre under any of the following conditions:</p> <ol style="list-style-type: none"> 1. Where vigorous vine growth is expected; 2. In warmer growing areas; 3. Where mealybug and European fruit lecanium populations are expected to be heavy; 4. Where vine populations exceed 600 per acre, or; 5. For suppression of nematodes. <p>*Repeated and regular use of MANA Alias 2F over several, consecutive growing seasons controls existing <i>Phylloxera</i> infestations over time or prevents <i>Phylloxera</i> from becoming established.</p>
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HOPS

Pest Controlled	Rate: Fluid ounces per acre
Aphids	19.2
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 60 days • Maximum MANA Alias 2F allowed per season: 19.2 fluid ounces/Acre (0.3 lb AI/Acre) Applications: Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation. • Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation. 	

POME FRUIT

Crops of Crop Group 11 Including: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate: Fluid ounces per acre
Aphids (including woolly apple aphid) Leafhoppers	16-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed per season: 24 fluid ounces/Acre (0.38 lb AI/Acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging Applications: Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation into the root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

POMEGRANATE

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers/Sharpshooters Whiteflies	16-32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 0 day • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI per acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation into the root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

STONE FRUIT

Crops of Crop Group 12 Including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson, and Japanese), Plumcot, Prune (fresh and dried)

In-field, Soil Application	
Pests Controlled	Rate: Fluid ounces per acre
Aphids (including woolly apple aphid) Leafhoppers	16-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA Alias 2F allowed per season: 24 fluid ounces/Acre (0.38 lb AI/Acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	
Pre-plant, Root Dip Application	
Pest Controlled	Rate fluid ounces per 10 gallons root-dip solution

Black peach aphid (infesting roots)	2.0
Mix MANA Alias 2F at 2.0 fluid ounces per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the MANA Alias 2F solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.	

TREE NUTS

Crops of Crop Group 14 Including: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Rate: Fluid ounces per acre
Aphids Leafhoppers/Sharpshooters Mealybugs Spittlebugs Termites Whiteflies	16-32
Pests/Diseases Suppressed	Rate: Fluid ounces per acre
Pecan scab (from reduction in honeydew deposition)	16-32
Thrips (foliage-feeding thrips only)	32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 7 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI/Acre) • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage prior to or at onset of pest infestation in one of the following methods: <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent irrigation equipment. Pre-wet soil prior to applications of MANA Alias 2F and allow soil to dry following application and prior to subsequent irrigation. • Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site. • Shank or subsurface side-dress, injected to a depth just above or just within the root zone and between the trunk and drip line of the tree canopy. Product should be applied in a minimum of 10 gallons per acre using multiple shanks on both sides of trees. Ensure product placement is below sod or orchard floor debris. Irrigation covering entire treated area should follow within 48 hours to promote uptake by root system. • For control of termites, apply specified dosage to slightly moist soil as a high-volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk. Utilize sufficient carrier volume to penetrate the soil to a depth of 18-24 inches to obtain optimum control. Allow soil to dry following treatment and prior to applying any irrigation. Remarks: Use the higher listed rates when applied by shank or subsurface side dress, used on larger trees, soils with high clay content, for high plant populations, and/or where extended control is desired. Under some conditions, control may not occur for 14 or more days or until two (2) irrigations have been made. Applications made later in the season may result in reduced efficacy.	

TROPICAL FRUIT

Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Jaboticaba, Guava, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu

Pests Controlled	Rate: Fluid ounces per acre
Aphids, Avocado lacebug, Leafhoppers, Whiteflies	24-32
Pests Suppressed	Rate: Fluid ounces per acre
Scales, Thrips (foliage feeding thrips only)	32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 6 days • Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI/A). • Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

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OTHER CROPS

CHRISTMAS TREE

Pests Controlled	Rate: Fluid ounces per acre
White grub complex (damage from grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)	16-32
Restrictions: <ul style="list-style-type: none"> Maximum MANA Alias 2F allowed per season: 32 fluid ounces/Acre (0.5 lb AI/Acre) Applications: Soil incorporation and movement of MANA Alias 2F to the root-zone is required for activity. MANA Alias 2F can be incorporated most readily when applied to moist soil. Apply specified dosage in one of the following methods: <ul style="list-style-type: none"> Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 18-inch band on each side of the row (small trees) to full broadcast application (large trees) followed by rainfall or 0.25-1 inch of irrigation within 12 hours after application. For optimal grub control, apply MANA Alias 2F during adult flight activity, or up to mid-July, when 1 st instar larvae are present.	

POPLAR/COTTONWOOD

(includes members of the genus *Populus* grown for pulp or timber)

Field Applications. See details below for Cuttings/Whips Applications.	
Pests Controlled	Rate: Fluid ounces per acre
Aphids Cottonwood leaf beetle	16-32
Pest Suppressed	
<i>Phylloxera popularia</i>	16-32
Restrictions: <ul style="list-style-type: none"> Maximum MANA Alias 2F allowed at-plant per crop season: 32 fluid ounces/Acre (0.5 lb AI/Acre) Do not apply pre-bloom or during bloom or when bees are actively foraging. Applications: Apply specified dosage in the following method: <ul style="list-style-type: none"> Chemigation through low-pressure drip irrigation. For narrow-row, cutting orchards/nurseries used for plant propagation, shank into root-zone followed by adequate irrigation to promote uptake. (Adequate irrigation depends on soil moisture level at application. Under dry conditions, use 0.25 inches/Acre). For Cottonwood leaf beetle, protection against damage will occur when application is made early-season, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake. For <i>Phylloxera</i> , apply early in the year from break of dormancy through May.	
Cutting/Whip Applications. See details above for Field Applications.	
Pest Controlled	Cutting/Whip Soaking Solution fluid ounces MANA Alias 2F Needed per 100 gallons
Cottonwood leaf beetle	13.2-26.6 (unhydrated cuttings/whips) 26.6-40.0 (partially hydrated cuttings/whips)
Pests Suppressed	Cutting/Whip Soaking Solution fluid ounces MANA Alias 2F Needed per 100 gallons
Aphids <i>Phylloxera popularia</i>	13.2-26.6 (unhydrated cuttings/whips) 26.6-40.0 (partially hydrated cuttings/whips) ¹
Restrictions: <ul style="list-style-type: none"> Maximum MANA Alias 2F allowed at-plant per crop season: 32 fluid ounces/Acre (0.5 lb AI/Acre) Applications: Moisture content of cuttings/whips prior to application, the solution concentration, and the length of soaking interval interact to affect the amount of product absorbed into plant material. For a constant soaking interval of 24 hours, drier cuttings/whips absorb a higher quantity of solution and require a lower concentration. Conversely, more hydrated cuttings/whips absorb less solution and require a higher concentration. Soaking of cuttings/whips should occur in a covered container in absence of UV light. Not all <i>Populus</i> spp. clones/varieties/hybrids have been tested for crop safety. Without specific knowledge about a particular <i>Populus</i> spp. clone/variety/hybrid, Makhteshim Agan of North America, Inc. suggests that small numbers of cuttings/whips of each be treated and evaluated prior to commercial use.	

Apply MANA Alias 2F in one of the following cuttings/whips soaking methods:

- For freshly cut (unhydrated) cuttings/whips, soak plant material in specified solution concentration for 24 hours prior to cold storage. After removal from cold storage, plant as needed.
- For previously hydrated cuttings/whips removed from cold storage, allow plant material to reach room temperature and soak in specified solution concentration for 24 hours prior to planting.

Take proper care in disposal of any residual soaking solution. Apply solution to existing trees or other registered crops as long as all product label precautions and restrictions are observed.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Open dumping is prohibited.

PESTICIDE STORAGE: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in cool, dry place. Do not store diluted spray.

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

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY.**

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

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