

66222-139

10-24-2007

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ms. Jane Rothwell
Product Registration
MANA, Inc.
4515 Falls of Neuse Rd, Suite 300
Raleigh, NC 27609

OCT 24 2007

SUBJECT: Application for Pesticide Notification (PRN 98-10)
Request Primary Brand Name "ABBA 0.15EC" and Warranty Statement Change
EPA Reg. No. 66222-139
Application Dated September 11, 2007

Dear Ms. Rothwell:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 09/11/07 for the above product. The Registration Division (RD) has conducted a preliminary screen of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

SDG



United States

Environmental Protection Agency

Washington, DC 20460

☐ Registration

☐ Amendment

☒ Other

OPP Identifier Number

Application for Pesticide - Section I

| | | |
|---|--|--|
| 1. Company/Product Number 66222-139 | 2. EPA Product Manager Thomas Harris | 3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name) Abamectin 0.15EC | PM# IRB | |
| 5. Name and Address of Applicant (Include ZIP Code) Makhteshim Agan of North America, Inc. 4515 Falls of Neuse Rd., Suite 300 Raleigh, NC 27609 <input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____ | |

Section - II

| | |
|--|--|
| <input type="checkbox"/> Amendment - Explain below. | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application. |
| <input checked="" type="checkbox"/> Notification - Explain below. | <input type="checkbox"/> Other - Explain below. |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

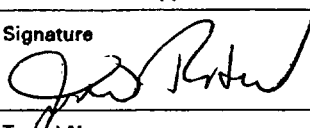
Notification of primary brand name and update of Warranty Statement per PRN 98-10. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make false statements to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

New Name: ABBA 0.15EC

Section - III

| | | | | | |
|---|---|--|-------------------|--|-------------------|
| 1. Material This Product Will Be Packaged In: | | | | 2. Type of Container | |
| Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No | Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No | Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____ | |
| * Certification must be submitted | | If "Yes" Unit Packaging wgt. | No. per container | If "Yes" Package wgt | No. per container |
| 3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container | | 4. Size(s) Retail Container | | 5. Location of Label Directions | |
| 6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled | | | | <input type="checkbox"/> Other _____ | |

Section - IV

| | | |
|---|-------------------------------------|---|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.) | | |
| Name Jane Rothwell | Title Registration Specialist | Telephone No. (Include Area Code) 901-861-4400 |
| Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. | | 6. Date Application Received (Stamped) |
| 2. Signature  | 3. Title Registration Specialist | |
| 4. Typed Name Jane Rothwell | 5. Date 9-11-07 | |



Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504-P)
US Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave, NW
Washington, DC 20460

Re: Notification of Primary Brand Name for: Abamectin 0.15 EC and update of Warranty Statement
EPA Reg. No. 66222-139

ATTN: Thomas Harris
Phone: 703-308-9423

Dear Mr. Harris:

Makhteshim Agan of North America, Inc. notifies the Agency of its intention to market the referenced product under the Primary Brand Name *ABBA 0.15EC*.

We are also updating the Warranty Statement in accordance with the guidance document dated October 17, 2006.

In support of this request, the following documents are attached:

- Application for Pesticide Registration (EPA form 8570-1)
- One copy of final printed labeling

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula for this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

Please contact me at 901-861-4400 or by email at janer@manainc.com should you need any additional information.

Sincerely,

Jane Rothwell
Registration Specialist

Enclosures

4515 Falls of Neuse Road, Suite 300, Raleigh, NC 27609
Tel: 919-256-9300 Fax: 919-256-9308

5/18

RESTRICTED USE PESTICIDE

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS.

FOR RETAIL SALE TO AND USE BY ONLY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

ABBA™ 0.15EC

MITICIDE/INSECTICIDE

ACTIVE INGREDIENT:

Abamectin (CAS No. 65195-56-4 and 65195-55-3):.....1.9 %

INERT INGREDIENTS:.....98.1 %

TOTAL: 100.0%

1 gallon contains 0.15 lb. abamectin

EPA Reg. No. 66222-139

Manufactured for:

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

Net Contents: ___ Gallons

KEEP OUT OF REACH OF CHILDREN

WARNING / AVISO

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

FIRST AID

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Do not give any liquid to the person.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor immediately for treatment advice.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of soap and water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:

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

NOTE TO PHYSICIAN:

- Early signs of intoxication include mydriasis (dilated pupils), ataxia (unsteadiness), and muscle tremors. Toxicity follows accidental ingestion of the *Abamectin 0.15EC* and can be minimized by promptly administering activated charcoal.
- If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and respiratory functionality) as indicated by clinical signs, symptoms, and measurements.
- In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.

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

HOT LINE NUMBER

Contact PROSAR at 1-877-250-9291 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. For more options, follow the instructions for Category B on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils.
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

NOTICE: This product contains a chemical (N-methyl pyrrolidone) known to the state of California to cause birth defects or other reproductive harm.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. 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 apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. 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.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE
RESTRICTED USE PESTICIDE

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.**

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

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils.
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

FAILURE TO STRICTLY FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN INJURY TO CROPS, INEFFECTIVE PEST CONTROL, AND/OR ILLEGAL RESIDUES.

When applied to crops in accordance with the Directions for Use, *ABBA 0.15EC*, an emulsifiable concentrate, effectively controls mites and other insects specified on this label. Thorough coverage is essential for effective insect and mite control.

ABBA 0.15EC offers a wide margin of safety when applied to a variety of crops. *ABBA 0.15EC* is also compatible with other commonly used pesticides, nutritional sprays, and crop oils. Users of this product should pre-test for physical compatibility and lack of phytotoxic effect when using any proposed mixtures with *ABBA 0.15EC*.

CHEMIGATION STATEMENT

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

GENERAL USE RESTRICTIONS

Do not apply *ABBA 0.15EC* by aerial application equipment in New York State.

Spray Drift Precautions When Using *ABBA 0.15EC* on Celeriac, Cotton, Cucurbits, Fruiting Vegetables, Grapes, Leafy Vegetables, Potatoes, and Strawberries:

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

- Do not apply this product by air within 150 feet, or by ground within 25 feet, of rivers, lakes, permanent streams, reservoirs, potholes, marshes, natural ponds, commercial fish farm ponds, and estuaries.
- Ensure that aerial and ground application equipment is properly maintained and calibrated with appropriate carriers as specified in the crop-specific directions.
- When applying aerially, mount the spray boom to minimize drift from wing tip vortices. Use the minimum practical boom length and do not exceed 75% of the wingspan or rotor diameter.
- Use the largest droplet size consistent with good pest control. To minimize formation of very small droplets, select the appropriate nozzle, orient nozzles away from the air stream as much as possible, and avoid excessive spray boom pressure. Release spray at the lowest height consistent with flight safety and pest control practices. Avoid applications more than 10 feet above the crop canopy.
- Aerial or ground applications should be made when wind conditions are favorable for on-target product deposition—approximately 3 to 10 mph. If wind velocity exceeds 15 mph, do not apply this product. If wind gusts approach 15 mph, applications should be avoided. Avoid applying *ABBA 0.15EC* when wind direction is toward aquatic area(s) to reduce risk of exposure to the aquatic area(s). Allow growth of a vegetative filter strip to safeguard aquatic areas. This can be accomplished by not cultivating within 25 feet of aquatic areas.
- Avoid applying this product during low humidity and/or high temperatures. These conditions increase the evaporation rate of spray droplets and, therefore, increase the likelihood of spray drift to aquatic areas.
- Do not apply by air or by ground during temperature inversions, which are characterized by stable air and temperatures increasing with height above the ground. Inversions are often accompanied by mist or fog in humid areas. Applicators may detect an inversion by producing smoke and observing a smoke layer near the ground.

RESISTANCE MANAGEMENT

To minimize the potential development of pest resistance to abamectin, use of resistance management strategies is imperative, especially when applying *ABBA 0.15EC* to crops that are hosts of pests on this label that have multiple generations per crop or per year. Examples of resistance management may include but are not limited to the following: non-chemical alternatives (such as beneficial arthropods); rotating susceptible and non-susceptible plants; rotating uses of pesticides with different modes of action; avoiding use of the same product on successive generations of pests; use of various other cultural practices; and using labeled rates at specified spray intervals. Consult your State Cooperative Extension Service to obtain additional information regarding these or other resistance management strategies.

CROP USE RECOMMENDATIONS

ALMONDS AND WALNUTS

For controlling strawberry spider mites, Pacific spider mites, two-spotted spider mites, and European red mites. (Ground application only.)

Apply ABBA 0.15EC when mites initially appear. To maintain control, make a second application of ABBA 0.15EC after at least 21 days, if needed. Spray deposits on newer leaves (compared to older leaves) provide greater residual spider mite control.

Use conventional dilute or concentrate ground sprayers with enough water to provide thorough coverage. Volume of spray will vary with the size and number of trees per acre and foliage density. Assure thorough coverage to attain spider mite control. ABBA 0.15EC should be used with a Horticultural Spray Oil (not a dormant oil) that is approved for use on almonds and walnuts. If applications are made without Horticultural Spray Oil, reduced efficacy and/or reduced residual control could result.

Reduce the risk to aquatic environments by maintaining a 25-yard buffer zone from all water bodies containing aquatic life (streams, ponds, lakes, rivers, springs, irrigation canals containing water year-round, swamps, bogs, and marshes).

| Pests | Rate of ABBA 0.15EC & Horticultural Spray Oil* | |
|-------------------------|--|--|
| | Dilute Sprays ¹ | Concentrate Sprays ² |
| Two-spotted spider mite | 2.5-5.0 fl. oz. | 10-20 fl. oz. |
| Pacific spider mite | ABBA 0.15EC/100 gals. water plus 1 qt. | ABBA 0.15EC/A |
| Strawberry spider mite | Horticultural Spray Oil*/100 gals. (i.e., | plus at least 1 gal. Horticultural Spray |
| European red mite | 0.25% of finished spray) | Oil*/Ac |

*Not a dormant oil

¹Rates per 100 gals. dilute spray are based on a 400 gal./acre spray volume.

²To determine the ABBA 0.15EC rate per acre for concentrate sprays, it is necessary to first determine the amount needed for a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as required for dilute sprays to the same grove/orchard. The result may be less than 10 fl. oz./acre when used on smaller trees.

Use Restrictions-Almonds and Walnuts

- Do not apply aerially.
- Do not apply in less than 40 gallons of water per acre.
- Do not retreat within 21 days of the first application.
- Do not use more than 20 fl. oz. of ABBA 0.15EC per acre per application or 40 fl. oz./A in a growing season.
- Do not exceed 2 applications per growing season.
- Do not apply within 21 days of harvest.
- Do not allow livestock to graze treated orchards.

APPLES

For controlling tentiform leafminers, white apple leafhoppers, European red mites, McDaniel spider mites, and two-spotted spider mites. (Ground application only.)

Apply ABBA 0.15EC when pest thresholds are reached. If necessary, make a second application after at least 21 days to attain adequate control.

White Apple Leafhopper (Do not use west of Rocky Mountains): Only apply ABBA 0.15EC to the first generation white apple leafhopper. Apply with a horticultural spray oil* soon after petal fall.

Spider Mites: Apply ABBA 0.15EC before the population reaches 5 spider mites per leaf. Residual control is improved when spray deposits are on newer leaves (compared to older leaves). Limit applications to the period between petal fall through six weeks after petal fall.

Tentiform Leafminers: Apply ABBA 0.15EC onto eggs to control new hatch and at early sap feeder stages of the first and second generations when leafminer populations reach locally established thresholds. Do not apply ABBA 0.15EC during bloom stage.

Use conventional dilute or concentrate ground sprayers with enough water to produce thorough coverage. Spray volume will vary with the size and number of trees per acre and foliage density. Assure thorough coverage to attain spider mite and insect control. Best results are attained when applied as directed in combination with Horticultural Spray Oil (not dormant oil) that has been approved for use on apples. If Horticultural Spray Oil is not used, reduced efficacy and/or reduced residual control could result.

ABBA 0.15EC may cause injury to fruit of some apple varieties when used with Horticultural Spray Oils or when other products are sequentially applied. For example, russetting may occur on Golden Delicious and other light-skinned varieties. Users should carefully follow the Directions For Use and Precautions on the labels of Horticultural Spray Oils or those in official spray guides when using **ABBA 0.15EC** in combination with Horticultural Spray Oils. For example, applications of *Abamectin 0.15EC* with horticultural spray oil less than 14 days before or after a captan application can result in phytotoxicity.

| Pests | Rate of ABBA 0.15EC & Horticultural Spray Oil* | |
|--|--|---|
| | Dilute Sprays ¹ | Concentrate Sprays ² |
| Two-spotted spider mite McDaniel spider mite European red mite Tentiform leafminers White apple leafhopper | 2.5-5.0 fl. oz. ABBA 0.15EC /100 gals. water <i>plus</i> 1 qt. Horticultural Spray Oil*/100 gals (i.e., 0.25% of finished spray) | 10-20 fl. oz. ABBA 0.15EC /A <i>plus</i> at least 1 gal. Horticultural Spray Oil*/A |

*Not a dormant oil

¹Rates per 100 gals. dilute spray are based on a 400 gals./acre spray volume.

²To determine the **ABBA 0.15EC** rate per acre for concentrate sprays, it is necessary to first determine the amount needed for a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as required for dilute sprays to the same grove/orchard. The result could be less than 10 fl. oz./acre when used on smaller trees.

Use Restrictions-Apples

- Do not apply aerially.
- Do not apply **ABBA 0.15EC** during bloom stage.
- Do not apply in less than 40 gallons of water per acre.
- Do not retreat within 21 days of the first application.
- Do not use more than 20 fl oz of **ABBA 0.15EC** per acre per application or 40 fl oz/A in a growing season.
- Do not exceed 2 applications per growing season.
- Do not apply within 28 days of harvest.
- Do not graze treated orchards.

Spray Drift Precautions-Apples

The following precautions apply when spraying in the vicinity of aquatic areas such as reservoirs, permanent streams, lakes, natural ponds, marshes, estuaries, and commercial fish farm ponds:

- Do not apply **ABBA 0.15EC** within 110 feet upwind of any aquatic area.
- Do not apply **ABBA 0.15EC** when weather conditions favor drift to any aquatic area.
- Do not apply **ABBA 0.15EC** when wind speed exceeds 8 mph.
- Do not apply when a temperature inversion occurs.
- On the last three rows upwind of aquatic areas, use nozzles on one side only and direct sprays away from aquatic areas.
- Adjust or turn off top nozzles to avoid spraying over treetops. When applying **ABBA 0.15EC** onto the outside row, turn off nozzles on the side away from the grove/orchard being sprayed. When turning at ends of rows and when passing tree gaps within rows, turn off nozzles.

AVOCADOS

For controlling avocado thrips.

Abamectin 0.15EC may be applied using ground or aerial application equipment. Aerial application is permitted; however, aerial application is not the preferred method of application for the best control of thrips. Spray coverage and the resulting control of thrips when applied by air is less than with ground application. The user accepts all liability for the level and duration of control of thrips when *Abamectin 0.15EC* is aerially applied. When applying by ground, use a minimum of 100 gallons of water per acre and when applying by air, use a minimum of 50 gallons of water per acre. Do not apply **ABBA 0.15EC** by aerial application equipment in New York State.

Spray volume will vary with the size and number of trees per acre and foliage density. Assure thorough coverage to attain spider mite and insect control.

| Pests | Rate of ABBA 0.15EC fl. oz./A | *Thrips Infestation level | Number of immature thrips per leaf/fruit |
|----------------|--------------------------------------|---------------------------|--|
| Avocado Thrips | 10.0 – 20.0 <i>Abamectin</i> | Low | 1-2 |

| | | | |
|------------------------|--|----------|-------------|
| (Scirtothrips perseae) | 0.15EC/A plus a horticultural oil as specified below | Moderate | 3-4 |
| | | Severe | More than 5 |

Avocado Thrips: Apply when immature thrips are first observed but before numbers exceed 5 immature thrips per leaf/fruit. Use 10-15 fl. oz. of product/A. for low* to moderate* infestations and 15-20 fl. oz. of product/A for severe* infestations. Add a 1.0% - 4.0% NR (narrow range) 415 oil in combination with a horticultural spray oil (not a dormant oil) approved for use on avocados. Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. (See Use Restrictions.) For Ground Application: If spray volume is greater than 400 gals./A, apply *Abamectin 0.15EC* at a rate of 2.5 fl. oz. per 100 gals. of water plus 1.0%-4.0% of a narrow range 415 oil. Observe all precautions and restrictions on the oil label to prevent crop injury. Treat a small test area before making a large scale application when using oil concentrations above 2.0%.

Use Restrictions- Avocados

- Do not use less than 10 fl. oz. of *Abamectin 0.15EC/A* per application nor more than 20 fl. oz. of *Abamectin 0.15EC/A* per application.
- Do not apply within 14 days of harvest.
- Do not retreat within 30 days of the first application nor make more than 2 applications per season.
- Do not apply more than 40 fl. oz./A per season.

CELERIAC (*Apium graveolens*)

For controlling two-spotted spider mites.

Apply *ABBA 0.15EC* when mites first appear and repeat as necessary to maintain control.

Use conventional dilute or concentrate ground sprayers with enough water to provide thorough coverage of the foliage. Best results are obtained when *ABBA 0.15EC* is used in combination with a non-ionic surfactant.

| Pests | Fl. oz. <i>ABBA 0.15EC/A</i> |
|--------------------------|------------------------------|
| Two-spotted spider mites | 16.0 |

Use Restrictions-Celeriac

- Do not apply in less than 20 gallons of water per acre.
- Do not apply at intervals of less than 7 days.
- Do not exceed 48 fl. oz./A. after transplanting.
- Do not apply within 7 days of harvest.
- For resistance management, do not exceed 2 applications sequentially.

CITRUS FRUIT CROP GROUP

Some of the crops in this group are Citrus citron, Citrus hybrids, Citrus species (includes chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Sour orange, and Sweet orange.

For controlling citrus rust mites, broad mites, citrus red mites, Texas citrus mites, two-spotted spider mites, and citrus bud mites, Asian citrus psylla, citrus leafminers, and citrus thrips. (Ground application only.)

Mites (other than citrus bud mites): Apply *ABBA 0.15EC* when mites initially appear in the spring, summer, and/or fall months.

Citrus Bud Mites: Best results can be attained when *ABBA 0.15EC* is applied at "bud swell."

Asian Citrus Psylla: *ABBA 0.15EC* should be applied to protect new growth during the spring, summer, or fall months but will only control adult and nymphs present at the time of application.

Citrus Leafminers: *ABBA 0.15EC* should be applied to protect new growth during the spring, summer, or fall months.

Citrus Thrips: Each application of *ABBA 0.15EC* only controls the current generation. Therefore, applications must be timed when economic thresholds have been reached—after eggs have begun to hatch, preferably at early to mid-hatch.

Apply *ABBA 0.15EC* using conventional dilute or concentrate ground sprayers with enough water to provide thorough coverage (or outside coverage to control Asian citrus psylla, citrus thrips, and citrus leafminers). Spray volume varies with the number and size of trees per acre, and also with foliage density. For good pest control, ensure thorough coverage.

Unless specified differently below, apply **ABBA 0.15EC** with at least 1.6 pt. Horticultural Spray Oil (not dormant oil)/100 gals finished spray (i.e., 0.2% of finished spray) for dilute sprays or at least 1.0 gallon of Horticultural Spray Oil per acre in concentrate sprays.

| Pests | Dilute Sprays ¹ | Concentrate Sprays ² |
|-------------------------|---|---|
| | Fl. oz. ABBA 0.15EC /100 gals | Fl. oz. ABBA 0.15EC /A |
| Citrus rust mite | 1.0-2.0 | 10-20 ³ |
| Broad mite | 1.0-2.0 | 10-20 ³ |
| Citrus red mite | 1.0-2.0 | 10-20 |
| Texas citrus mite | 1.0-2.0 | 10-20 |
| Two-spotted spider mite | 1.0-2.0 | 10-20 |
| Citrus bud mite | 1.0-2.0 | 10-20 ⁴ |
| Asian Citrus Psylla* | -- | 10-20 ³ |
| Citrus leafminer | -- | 10-20 ³ |
| Citrus thrips | -- | 10-20 ⁵ |
| | Plus at least 1.6 pt. Horticultural Spray Oil**/100 gals (i.e., 0.2% of finished spray) | Plus at least 1 gal. Horticultural Spray Oil**/Ac |

* Not registered for use in California.

**Not a dormant oil.

¹The rate of **ABBA 0.15EC** per 100 gals. is based on a volume of 1,000 gals./A dilute spray.

²For concentrate sprays, the dosage must be adjusted to apply an amount of product per acre equal to the amount required for full cover dilute sprays.

³Use 150-300 gals/A of spray mix with a minimum of 3 gals. /A of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 MPH.

⁴Use at least 500 gals. of spray mix per acre with at least 0.5% Horticultural Spray Oil*.

⁵Use 100-250 gals. of spray mix/A applied to achieve outside coverage.

Use Restrictions-Citrus

- Do not apply aerially.
- **ABBA 0.15EC** should always be applied with Horticultural Spray Oil (not dormant oil) as directed.
- Do not apply Abamectin 0.15EC more than 1 time per season. To manage resistance, if a subsequent application is needed for pest control, a product with a different mode of action must be used.
- Do not apply within 7 days of harvest.
- For resistance management, do not apply **ABBA 0.15EC** in citrus nurseries.

Spray Drift Precautions-Citrus

The following precautions apply when spraying in the vicinity of aquatic areas such as reservoirs, permanent streams, lakes, natural ponds, marshes, estuaries, and commercial fish farm ponds:

1. Do not apply within 110 feet upwind of any aquatic area.
2. Do not apply **ABBA 0.15EC** when current weather conditions favor drift to aquatic areas.
3. Do not apply if a temperature inversion is present.
4. Do not apply **ABBA 0.15EC** when wind speed exceeds 8 mph.
5. On the last three rows upwind of aquatic areas, nozzles should be used on one side only with spray directed away from aquatic areas.
6. Adjust or turn off top nozzles to avoid spraying over treetops. When applying **ABBA 0.15EC** onto the outside row, turn off nozzles on the side away from the grove/orchard being sprayed. When turning at ends of rows and when passing tree gaps within rows, turn off nozzles.

COTTON (West of the Mississippi River only)

For control of two-spotted spider mites, carmine spider mites, Pacific spider mites, and strawberry spider mites.

For early season control, apply **ABBA 0.15EC** when cotton is no more than 10 inches high. Use ground equipment only, dilute with water, and apply at a rate of 4-6 fl. oz. of **ABBA 0.15EC** per acre. Do not use less than 4 fl. oz. of **ABBA 0.15EC** per acre.

For mid-season or at lay-by control, apply **ABBA 0.15EC** when mites are first observed, and if necessary, repeat application. Mix **ABBA 0.15EC** with water and apply at the rates provided in the chart below. Depending on plant size and foliage density, use 8-16 fl. oz. of **ABBA 0.15EC** per acre. Apply by ground sprayer or by fixed wing aircraft or helicopter, using a minimum of 5 gallons of water per acre for thorough coverage.

| Pests | Rate of ABBA 0.15EC | |
|---|---------------------|-------------------|
| | Early Season | Mid-Season/Lay-by |
| Two-spotted spider mite Pacific spider mite Strawberry spider mite Carmine spider mite | 4-6 fl. oz./A | 8-16 fl. oz./A |

Use Restrictions-Cotton

- Do not apply this product to cotton east of the Mississippi River.
- Do not apply more than 2 times per season or more than 32 fl. oz. of product per acre per growing season.
- Do not apply at intervals of less than 21 days.
- Do not apply within 20 days of harvest.
- Do not graze or feed treated cotton foliage.

Spray Drift Precautions-Cotton

The following precautions apply when spraying in the vicinity of aquatic areas such as reservoirs, permanent streams, lakes, natural ponds, marshes, estuaries, and commercial fish farm ponds:

- Do not apply this product by air within 150 feet, or by ground within 25 feet, of rivers, lakes, permanent streams, reservoirs, potholes, marshes, natural ponds, commercial fish farm ponds, and estuaries.
- Ensure that aerial and ground application equipment is properly maintained and calibrated with appropriate carriers as specified in the crop-specific directions.
- When applying aerially, mount the spray boom to minimize drift from wing tip vortices. Use the minimum practical boom length and do not exceed 75% of the wingspan or rotor diameter.
- Use the largest droplet size consistent with good pest control. To minimize formation of very small droplets, select the appropriate nozzle, orient nozzles away from the air stream as much as possible, and avoid excessive spray boom pressure. Release spray at the lowest height consistent with flight safety and pest control practices. Avoid applications more than 10 feet above the crop canopy.
- Aerial or ground applications should be made when wind conditions are favorable for on-target product deposition—approximately 3 to 10 mph. If wind velocity exceeds 15 mph, do not apply this product. If wind gusts approach 15 mph, applications should be avoided. Avoid applying ABBA 0.15EC when wind direction is toward aquatic area(s) to reduce risk of exposure to the aquatic area(s). Allow growth of a vegetative filter strip to safeguard aquatic areas. This can be accomplished by not cultivating within 10 feet of aquatic areas.
- Avoid applying this product during low humidity and/or high temperatures. These conditions increase the evaporation rate of spray droplets and, therefore, increase the likelihood of spray drift to aquatic areas.
- Do not apply by air or by ground during temperature inversions, which are characterized by stable air and temperatures increasing with height above the ground. Inversions are often accompanied by mist or fog in humid areas. Applicators may detect an inversion by producing smoke and observing a smoke layer near the ground.

CUCURBITS CROP GROUP

Including but not limited to Summer Squash, Winter Squash (includes butternut squash, calabazza, hubbard squash, acorn squash, spaghetti squash), Chayote, Chinese Waxgourd, Pumpkin, Citron Melon, Melons, Cucumbers, *Momordica* spp.(includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Gherkin, Edible Gourds (includes hyotan, cucuzza, hechima, Chinese okra), Muskmelon, Cantaloupe, and Watermelon.

For controlling leafminers and spider mites.

Apply ABBA 0.15EC when adult leafminer flies or spider mites are initially seen. Repeat applications when needed to maintain control. When low to moderate infestations are present, use 8 fl. oz. per acre; for severe infestations, use 16 fl. oz per acre.

Apply as a foliar spray in at least 20 gallons of water per acre by ground or in at least 5 gallons per acre by air. Under conditions such as high pest populations, dense or rank foliage, high temperatures or other such adverse application situations, use a greater water volume to ensure adequate coverage. For best results, ensure that good upper and lower leaf coverage is attained. Do not apply ABBA 0.15EC by aerial application equipment in New York State.

| Pests | Fl. oz. ABBA 0.15EC/A |
|----------------------------|-----------------------|
| Spider mites Leafminers | 8.0-16.0 |

Use Restrictions-Cucurbits Crop Group

- Do not apply in less than 20 gallons of water per acre by ground or in less than 5 gallons per acre by aircraft.
- Do not apply at intervals of less than 7 days.
- Do not use more than 48 fl. oz per acre in any growing season.
- Do not apply within 7 days of harvest.
- For resistance management, do not exceed 2 sequential applications.

FRUITING VEGETABLE CROP GROUP

Including but not limited to tomato; eggplant; peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), tomatillo

For controlling Tomato pinworm, Broad mite, Liriomyza leafminers, Colorado potato beetle, Spider mites, Thrips palmi, and Tomato russet mite.

Broad, russet, and spider mites: Apply when mites first appear.

Thrips palmi: Apply when thrips are first observed.

Tomato pinworm: Application may be made from the time moth activity is detected up to, but no later than the time when newly emerged larvae are present.

Mites, leafminers, Thrips palmi, and Colorado potato beetle: Use 8 fl. oz/A. for low to moderate infestations and 16 fl. oz/A. for severe infestations.

Apply as a foliar spray in at least 20 gallons of water per acre by ground or in at least 5 gallons per acre by air. Under conditions such as high pest populations, dense or rank foliage, high temperatures or other such adverse application situations, use a greater water volume to ensure adequate coverage. For best results, ensure thorough coverage of the crop canopy. With aerial application, spray coverage and the resulting control of mites is less than when using ground application equipment. For this reason, the user accepts all liability for the level and duration of control of mites when *Abamectin 0.15EC* is aerially applied. Do not apply *ABBA 0.15EC* by aerial application equipment in New York State.

Repeat application as necessary to maintain control.

Abamectin 0.15EC may be used without a wetting agent. Spreading and penetrating surfactants can improve insect control when necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants.

| Pest | Fl. oz. <i>ABBA 0.15EC/A</i> |
|------------------------|------------------------------|
| Broad mite | 8.0-16.0 |
| Colorado potato beetle | |
| Liriomyza leafminers | |
| Spider mites | |
| Thrips palmi | |
| Tomato Russet mite | |
| Tomato pinworm | 16.0 |

Use Restrictions- Fruiting Vegetables Crop Group

- Do not apply within 7 days of harvest.
- For resistance management, do not use on fruiting vegetables grown for transplanting.
- Wait at least 7 days before repeating application but do not make more than 2 sequential applications nor exceed 48 fl. oz./A in a growing season.

GRAPES

For controlling two-spotted spider mites, Pacific spider mites, Willamette spider mites, and western grapeleaf skeletonizers, and for contact knock-down control of western grape leafhoppers

Spider mites: Apply when mites initially appear, but before the number of motiles exceeds 5 per leaf. When low to moderate infestations are present, use 8 fl. oz/acre; for severe infestations, use 16 fl. oz./acre.

Western grapeleaf skeletonizer: Apply *ABBA 0.15EC* with a non-ionic surfactant when the larvae are initially seen. For best results, apply *ABBA 0.15EC* shortly after eggs hatch. When low to moderate infestations are present, use 8 fl. oz/acre; for severe infestations, use 16 fl. oz./acre.

Western grape leafhoppers and variegated leafhoppers: For contact knock-down control of these pests, apply *ABBA 0.15EC* with a non-ionic surfactant when pest first appears. When low to moderate infestations are present, use 8 fl. oz/acre; for severe infestations, use 16 fl. oz./acre.

Use conventional ground sprayers only with enough water to provide thorough coverage. For good pest control, thorough coverage is essential. To improve the wetting of foliage and to spread out spray deposits, always use *ABBA 0.15EC* in combination with a non-ionic surfactant. To maximize coverage, *ABBA 0.15EC* must be applied to both sides of each row (i.e., do not use alternate row treatments).

It is not possible to test all grape varieties under the multitude of biotic and abiotic conditions that may cause phytotoxicity. Therefore, carefully follow the Directions for Use and Precautions sections of non-ionic surfactant labels and/or official spray guides when using *ABBA 0.15EC* with a non-ionic surfactant.

| Pests | Fl. oz. <i>ABBA 0.15EC</i> /A |
|---|--|
| Two-spotted spider mite Pacific spider mite Willamette spider mite Western grapeleaf skeletonizer Western grape leafhopper* Variegated leafhopper* | 8.0-16.0 Plus a nonionic surfactant** |

* Note: *Abamectin 0.15EC* only provides contact knock-down control of this pest.

**Note: *ABBA 0.15EC* must be applied with a non-ionic surfactant to spread out spray deposits and improve wetting of foliage.

Use Restrictions-Grapes

- Do not apply in less than 50 gallons of water per acre except when using an electrostatic sprayer; do not use less than 5 gallons of water per acre with this type of spray equipment.
- Do not reapply within 21 days of first application.
- Do not use more than 16 fl. oz. of *ABBA 0.15EC* per acre per application or 32 fl. oz. per acre in a growing season.
- Do not exceed two applications per growing season nor apply within 28 days of harvest.
- Do not graze treated vineyards.

HERB CROP SUBGROUP (EXCEPT CHIVES)

Including but not limited to basil, camomile, catnip, coriander (leaf), dill weed, lavender, marigold, marjoram (*Oiganum* species), nasturtium, parsley (dried), rosemary, sage, summer and winter savory, tarragon, thyme, and wintergreen.

For controlling *Liriomyza* leafminers.

Apply using conventional ground sprayers only in a minimum of 30 gallons of water per acre. Apply as a foliar spray providing thorough coverage of the upper and lower leaf surfaces. *Abamectin 0.15EC* may be used without a wetting agent. When it is necessary to smooth out spray deposits or improve the wetting of foliage, a nonionic surfactant may be used. To avoid crop injury, carefully follow the Directions for Use and Precautions sections of non-ionic surfactant labels and/or official spray guides when using *ABBA 0.15EC* with a non-ionic surfactant.

Use the lower rate for low to moderate infestations and the higher rate for severe infestations. Apply when adult flies are first observed and repeat application as necessary to maintain control.

| Pest | Fl. oz. <i>ABBA 0.15EC</i> /A |
|-----------------------------|-------------------------------|
| <i>Liriomyza</i> leafminers | 8.0-16.0 |

Use Restrictions-Herb Crop Subgroup (Except Chives)

- Do not apply within 14 days of harvest.
- Do not reapply within 7 days of first application.
- Do not make more than 2 applications per single cutting (harvest) nor make more than 6 applications per cropping season at the 8 fl. oz./A. rate or 3 applications per cropping season at the 16 fl. oz./A. rate.

HOPS (Not registered for use in California)

For controlling two-spotted spider mites.

Apply *ABBA 0.15EC* when populations of two-spotted spider mites reach treatment thresholds. When hop vines are 6-8 feet tall, use 8-16 fl. oz. *ABBA 0.15EC* in at least 40 gallons of water using conventional ground equipment only. When hop vines exceed 8 feet in height, use 16 fl. oz. *ABBA 0.15EC* in at least 100 gallons of water. Do not retreat with an abamectin product within 21 days of the initial application and then only after treatment with an alternative miticide with a different mode of action.

Mix with water as specified below then apply with ground equipment as a foliar spray to obtain good upper and lower leaf coverage. Spray volume may vary with plant size and density of foliage. To control two-spotted mites, thorough coverage of foliage is essential. When using concentrate sprays, the volume of water is reduced, but the amount per acre of *ABBA 0.15EC* remains the same as that of dilute sprays. *ABBA 0.15EC* can be used without a wetting agent; however, a nonionic surfactant is recommended to improve wetting of foliage and to spread out spray deposits.

| Pests | Fl. oz. <i>ABBA 0.15EC/A</i> |
|--------------------------|------------------------------|
| Two-spotted spider mites | 8.0-16.0 |

Use Restrictions-Hops

- Do not exceed 2 applications or 32 fl. oz./acre per growing season nor apply within 28 days of harvest.
- Do not graze treated hop yards.

Spray Drift Precautions-Hops:

Ensure that all ground application equipment is properly maintained and calibrated with appropriate carriers. Whenever spraying in the vicinity of aquatic areas (lakes, permanent streams, marshes, reservoirs, natural ponds, estuaries, commercial fish farm ponds), observe these precautions:

- Do not apply using ground equipment within 25 ft. of the aquatic areas mentioned above.
- Avoid applications when wind direction is toward aquatic areas.
- Do not apply if heavy rainfall is imminent or during temperature inversions that are characterized by stable air and temperatures increasing with height above the ground. Inversions are often accompanied by mist or fog in humid areas. Applicators may detect an inversion by producing smoke and observing a smoke layer near the ground.
- Use the largest droplet size consistent with good pest control. To minimize formation of very small droplets, select the appropriate nozzle, orient nozzles away from the air stream as much as possible, and avoid excessive spray boom pressure.
- Apply by ground when wind velocity favors on-target product deposition (approximately 3-10 mph). If wind is gusting or if wind velocity approaches 15 mph, do not apply. Consider use of a compatible drift reducing agent.
- Spray drift potential is increased when low humidity and high temperature increase the evaporative rate of droplets. When applying *ABBA 0.15EC* in these conditions, adjust equipment settings to produce larger droplets to compensate for evaporation.

LEAFY VEGETABLE CROP GROUP

Including but not limited to celery, lettuce (head and leaf), amaranth (Chinese spinach), garden cress, upland cress, dandelion, endive, fennel, parsley, radicchio, rhubarb, spinach, and swiss chard.

For controlling carmine spider mite, *Liriomyza* leafminers, and twospotted spider mite.

Leafminers: Apply when adult flies are first observed and repeat applications as needed to maintain control.

Spider mites: Apply when mites first appear, and repeat as needed to maintain control.

Apply as a foliar spray in at least 20 gallons of water per acre by ground or in at least 5 gallons per acre by air. Under conditions such as high pest populations, dense foliage, high temperatures, or other such adverse application situations, use a greater water volume to ensure adequate coverage. Thorough coverage of the crop canopy is essential. With aerial application, spray coverage and the resulting control of mites is less than when using ground application equipment. For this reason, the user accepts all liability for the level and duration of control of mites when *Abamectin 0.15EC* is aerially applied. Use the lower rates for low to moderate infestations and the higher rate for severe infestations. Do not apply *ABBA 0.15EC* by aerial application equipment in New York State.

Abamectin 0.15EC may be used without a wetting agent. Spreading and penetrating surfactants can improve insect control when necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants.

| Pests | Fl. oz. <i>ABBA 0.15EC/A</i> |
|--|--|
| Carmine spider mite <i>Liriomyza</i> leafminers Twospotted spider mite | 8.0-16.0 <i>plus</i> a nonionic surfactant |

Use Restrictions-Leafy Vegetable Crop Group

- Do not apply within 7 days of harvest.
- For resistance management, do not use on leafy vegetables grown for transplanting nor make more than 2 sequential applications.
- Do not reapply within 7 days of first application.
- Do not apply more than 48 fl. oz./A. per growing season.

MINT (PEPPERMINT AND SPEARMINT)

For controlling twospotted spider mite

Apply as a foliar spray in at least 20 gallons of water per acre by ground or in at least 5 gallons per acre by air. Under conditions such as high pest populations, dense foliage, high temperatures, or other such adverse application situations, use a greater water volume to ensure adequate coverage. Thorough coverage of the crop canopy is essential. With aerial application, spray coverage and the resulting control of mites is less than when using ground application equipment. For this reason, the user accepts all liability for the level and duration of control of mites when *Abamectin 0.15EC* is aerially applied. Do not apply *ABBA 0.15EC* by aerial application equipment in New York State.

Use the lower rates for low to moderate infestations and the higher rate for severe infestations. For optimum control, a nonionic or organosilicone-based surfactant may be used at rates specified on the surfactant label. To avoid crop injury, carefully follow the Directions for Use and Precautions sections of the surfactant labels and/or official spray guides when using in the spray mixture.

| Pest | Fl. oz. <i>ABBA 0.15EC/A</i> |
|------------------------|------------------------------|
| Twospotted spider mite | 8.0-12.0 |

Use Restrictions-Mint

- Do not apply within 28 days of harvest.
- Do not apply more than 12 fl. oz./A per application nor more than 36 fl. oz./A per crop season.
- Do not reapply within 7 days of first application.
- Do not make more than 2 sequential applications and do not apply more than 3 applications per season.
- Do not allow livestock to graze or feed treated foliage to livestock.

PEARS (including oriental pear trees)

For controlling European red mite, pear rust mite, yellow mites, two-spotted spider mite, McDaniel spider mite, and pear psylla.

Apply *ABBA 0.15EC* using conventional dilute or concentrate ground sprayers only calibrated to deliver enough water for thorough coverage but not less than 40 gallons of water per acre. Spray volume will vary with the size and number of trees per acre and foliage density. Assure thorough coverage to attain effective spider mite and insect control. Always apply *ABBA 0.15EC* combined with a Horticultural Spray Oil (not dormant oil) as directed.

Apply *ABBA 0.15EC* using at least 1 qt. Horticultural Spray Oil*/100 gals (i.e., 0.25% of finished spray) in dilute sprays or with at least 1.0 gal. of Horticultural Spray Oil* per acre in concentrate sprays.

Applying *Abamectin 0.15EC* plus horticultural spray oil less than 14 days before or after applying Captan can result in phytotoxicity and crop loss.

| Pests | Rate of <i>ABBA 0.15EC</i> & Horticultural Spray Oil * | |
|--|--|---|
| | Dilute Sprays ¹ | Concentrate Sprays ² |
| Two-spotted spider mite McDaniel spider mite European red mite Pear rust mite Yellow mite Pear psylla | 2.5-5.0 fl. oz. <i>ABBA 0.15EC</i> /100 gals water <i>plus</i> 1 qt. Horticultural Spray Oil*/100 gals (i.e., 0.25% of finished spray) | 10-20 fl. oz. <i>ABBA 0.15EC</i> /Ac <i>plus</i> at least 1.0 gal. Horticultural Spray Oil*/A |

*Not a dormant oil.

¹Rates per 100 gals. are based on a volume of 400 gals./acre dilute spray.

²To determine the *ABBA 0.15EC* rate per acre for concentrate sprays, it is necessary to first determine the amount needed for a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as required for dilute sprays to the same grove/orchard. The result may be less than 10 fl. oz./acre when used on smaller trees.

Use Restrictions-Pears

- Do not reapply within 21 days of first application nor apply within 28 days of harvest.
- Do not use more than 20 fl. oz. of ABBA 0.15EC per acre per application. Do not exceed 40 fl. oz./acre in a single growing season.
- Do not exceed 2 applications per growing season.
- Do not graze treated orchards.

Spray Drift Precautions-Pears

The following precautions apply when spraying in the vicinity of aquatic areas such as lakes, reservoirs, marshes, natural ponds, estuaries, permanent streams, and commercial fish farm ponds:

- Do not apply within 110 feet upwind of any aquatic area.
- Do not apply ABBA 0.15EC when current weather conditions favor drift to any aquatic area.
- Do not apply ABBA 0.15EC when wind speed exceeds 8 mph. Do not apply when a temperature inversion occurs.
- On the last three rows upwind of aquatic areas, use nozzles on one side only and direct sprays away from aquatic areas.
- Adjust or turn off top nozzles to avoid spraying over treetops. When applying ABBA 0.15EC onto the outside row, turn off nozzles on the side away from the grove/orchard being sprayed. When turning at ends of rows and when passing tree gaps within rows, turn off nozzles.

PLUMS AND PRUNES

For controlling European spider mite, Pacific spider mite, and twospotted spider mite.

Use conventional dilute or concentrate ground sprayers only with enough water to produce thorough coverage, but do not use less than 40 gallons of water per acre. Spray volume will vary with the size and number of trees per acre and foliage density. Assure thorough coverage to attain spider mite control.

Apply when mites first appear. A second application may be made, if needed, to maintain control.

Apply Abamectin 0.15EC in combination with a nonionic surfactant that spreads on and/or penetrates the leaf cuticle or apply with horticultural spray oil (not a dormant oil). To avoid crop injury, carefully follow the Directions for Use and Precautions sections of the surfactant or oil label(s) and/or official spray guides when using in the spray mixture.

| Pest | For dilute sprays ^A fl oz/100 gals. | For Concentrate sprays ^B fl/oz/A |
|------------------------|--|--|
| European red mite | 2.5-5.0 | 10-20 |
| Pacific spider mite | plus | plus |
| Twospotted spider mite | 0.25% or 1 gal./A horticultural spray oil (not a dormant oil) or nonionic surfactant at the labeled rate | horticultural spray oil (not a dormant oil) at a minimum of 1 gal./A |

^A The rate of Abamectin 0.15EC per 100 gals. is based on volume of 400 gals./A dilute spray.

^B To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./A on small trees.

Use Restrictions-Plums and Prunes

- Do not reapply within 21 days of first application nor within 21 days of harvest.
- Do not apply more than 20 fl. oz./A per application nor more than 40 fl. oz./A in a growing season.
- Do not make more than 2 applications per growing season.
- Do not allow livestock to graze in treated orchards.

Spray Drift Precautions-Plums and Prunes

The following precautions apply when spraying in the vicinity of aquatic areas such as lakes, reservoirs, marshes, natural ponds, estuaries, permanent streams, and commercial fish farm ponds:

- On the last three rows upwind of aquatic areas, use nozzles on one side only and direct sprays away from aquatic areas.
- Adjust or turn off top nozzles to avoid spraying over treetops. When applying ABBA 0.15EC onto the outside row, turn off nozzles on the side away from the grove/orchard being sprayed. When turning at ends of rows and when passing tree gaps within rows, turn off nozzles.
- Do not apply within 110 feet upwind of any aquatic area.

- 17
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- Do not apply *ABBA 0.15EC* when current weather conditions favor drift to any aquatic area.
 - Do not apply *ABBA 0.15EC* when wind speed exceeds 8 mph. Do not apply when a temperature inversion occurs.

POTATOES

For controlling Colorado potato beetles, *Liriomyza* leafminers, and spider mites.

Colorado potato beetles: Apply *Abamectin 0.15EC* when 50% of egg masses have hatched and larvae are observed. If two applications are planned, they should be restricted to a single Colorado potato beetle generation per season, and intervals of at least 7 days should be observed. For low to moderate infestations, use 8 fl. oz per acre; for severe infestations, use 16 fl. oz. per acre. Do not exceed 2 applications per season.

***Liriomyza* leafminers:** Initial application should be made when adult flies are first seen. Repeat applications as necessary to maintain control so long as there is a minimum of 7-day intervals between applications. For low to moderate infestations, use 8 fl. oz per acre; for severe infestations, use 16 fl. oz. per acre.

Spider mites: Apply the first application when mites first appear. Repeat applications as necessary to maintain control so long as there is a minimum of 7-day intervals between applications. For low to moderate infestations, use 8 fl. oz per acre; for severe infestations, use 16 fl. oz. per acre.

Apply as a foliar spray in at least 20 gallons of water per acre by ground or in at least 5 gallons per acre by air. Under conditions such as high pest populations, dense or rank foliage, high temperatures or other such adverse application situations, use a greater water volume to ensure adequate coverage. For best results, ensure that good upper and lower leaf coverage is attained. To optimize pest control, add an organosilicone-based surfactant or non-ionic surfactant at the manufacturer's recommended rate. Effectiveness may be reduced if *ABBA 0.15EC* is used with a binder or sticker type product (such as Bravo Weather Stik®). Do not apply *ABBA 0.15EC* by aerial application equipment in New York State.

| Pests | Fl. oz. <i>ABBA 0.15EC</i> /Ac |
|--|--------------------------------|
| Colorado potato beetles Spider mites <i>Liriomyza</i> leafminers | 8.0 – 16.0 |

Use Restrictions – Potatoes

- Do not use more than 32 fl. oz./acre per season to control spider mites or Colorado potato beetles or more than 48 fl. oz./acre per season to control leafminers.
- Do not exceed 2 sequential applications.
- Do not apply within 14 days of harvest.
- Do not graze or feed treated foliage to livestock.

STRAWBERRIES

For controlling two-spotted spider mites and strawberry spider mite.

Apply 16 fl. oz. per acre of *ABBA 0.15EC* when mites are initially seen. Make 2 applications at intervals of 7-10 days and repeat this sequence as needed to maintain control. Wait at least 21 days after the second application before repeating application. To ensure maximum coverage of tops and undersides of foliage, adjust nozzle placement and spray volume. *Abamectin 0.15EC* can be used without a wetting agent; however, a nonionic surfactant is recommended to improve wetting of foliage and to spread out spray deposits.

| Pests | Fl. oz. <i>ABBA 0.15EC</i> /Ac |
|---|--------------------------------|
| Two-spotted spider mite Strawberry spider mite | 16.0 |

Use Restrictions – Strawberries

- Do not apply in less than 50 gallons of water per acre with conventional ground application equipment only except when using an electrostatic sprayer; do not use less than 10 gallons of water per acre with this type of spray equipment.
- Do not use more than 16 fl. oz. of *ABBA 0.15EC* per acre per application. Do not exceed 64 fl. oz./acre in a single growing season.
- Do not apply within 3 days of harvest.
- For resistance management, *ABBA 0.15EC* must not be used in strawberry nurseries.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

PESTICIDE STORAGE: Store in a tightly closed container in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent) and dispose of in an incinerator or landfill approved for pesticide containers.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call Infotrac at 1-800-535-5053.

IMPORTANT INFORMATION—READ BEFORE USING PRODUCT

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

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.

ABBA 0.15EC (66222-139)(Notif to EPA 9-11-07)