



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 9, 2017

Matthew Feinberg
Authorized Agent to Novozymes Biologicals, Inc.
Exponent, Inc.
1150 Connecticut Avenue NW, Suite 1100
Washington, D.C. 20036

Subject: PRIA (Pesticide Registration Improvement Act) Labeling Amendment – Change the Expiration Date to 15 Months from Manufacture, Add a Crop and Pests, Add New Instructions for Using the Product Once Opened, and Make Other Changes to the Label (Including Those Requested by the EPA) (e.g., Adjust Personal Protective Equipment)
Product Name: Tick-EX EC Bioinsecticide
EPA Registration Number: 70127-10
Application Date: 05/19/2017
OPP Decision Number: 529998

Dear Mr. Feinberg:

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

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or

misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Nicola Steinmetz by phone at (703) 347-8567 or via email at steinmetz.nicola@epa.gov.

Sincerely,

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

Jeannine Kausch, Product Manager 92
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

[Text in brackets is optional]

(Note: The following information will be presented as a booklet on the front of the product container. Page 1 and 2 are the primary display panel of the booklet.)

TICK-EX EC BIOINSECTICIDE

[ABN: MET52[®] EC]

Sublabel A: Greenhouse, Nursery, Turf Grass and Agricultural Use

Sublabel B: Residential/Home & Garden Use

EPA Registration Number: 70127-10

EPA Establishment Number: [70127-VA-001]
[73314-WI-002]
[85238-CAN-001]

[Produced [For][By]:]
Novozymes Biologicals, Inc.
5400 Corporate Circle
Salem, VA 24153
1-888-744-5662 [1-800-245-4104]

Made in [USA] [Canada]
[www.bioag.novozymes.com]

A C C E P T E D

11/09/2017

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 70127-10

Sublabel A: Greenhouse, Nursery, Turf Grass and Agricultural Use

(Front Panel)

TICK-EX EC BIOINSECTICIDE

[ABN: MET52® EC]

ACTIVE INGREDIENT – <i>Metarhizium anisopliae</i> Strain 52*	% w/w 11.0%
OTHER INGREDIENTS**	<u>89.0%</u>
Total	<u>100.0%</u>

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/gram of product

** Contains petroleum distillates

[REFER TO DIRECTIONS OF USE WITHIN THIS BOOKLET]

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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 further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 (NPIC Web site: www.npic.orst.edu). For emergencies, call the poison control center at 1-800-222-1222.	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

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

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

Batch Code: _____

Not for Use or Sale After: _____ (Date stamped/placed on the label will be 15 months after the date of manufacture)

Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

[Produced [For][By]:]
Novozymes Biologicals, Inc.
5400 Corporate Circle
Salem, VA 24153
1-888-744-5662 [1-800-245-4104]

EPA Registration Number: 70127-10
EPA Establishment Number: [70127-VA-001]
[73314-WI-002]
[85238-CAN-001]

Made in [USA] [Canada]
[www.bioag.novozymes.com]

[NOVOZYMES RETHINK TOMORROW] [LOGO]

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Barrier laminate, nitrile rubber, neoprene rubber, or viton gloves
- Shoes and socks
- Protective eyewear
- A NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. (Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

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:

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

ENVIRONMENTAL HAZARDS

This product is approved for residential (urban and suburban) outdoor terrestrial non-food uses and agricultural food uses. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

PHYSICAL OR CHEMICAL HAZARDS

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300, day or night.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide 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 4 hours.

Exception: If the product is soil incorporated, 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
- Barrier laminate, nitrile rubber, neoprene rubber, or viton gloves
- Shoes plus socks
- Protective eyewear
- A NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses 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 unprotected persons out of treated areas until sprays have dried.

GENERAL

Tick-EX EC Bioinsecticide is composed of spores of the insect pathogenic fungus *Metarhizium anisopliae* strain F52. Once the product is sprayed onto foliage or drenched into the soil, insects that come into contact with the fungus will become infected. The spores of *Metarhizium anisopliae* attach to the surface of the insect, germinate and begin to grow. It will penetrate the exoskeleton of the insect and grow inside the insect, causing the insect to die. Under moderate temperatures, it usually takes 3 to 7 days, once the insect is exposed, for death to occur. At very cold or hot temperatures, death may occur more slowly. The fungal spores will be more persistent when incorporated in the soil, especially in potting media, than when applied to foliage.

Note: Tick-EX EC Bioinsecticide contains live spores that may be harmed by storage at high temperatures or held as a water suspension for more than 24 hours. Use entire contents of bottle once opened and do not hold mix for more than 24 hours. See storage and disposal section for more information.

MODE OF ACTION AND APPLICATION TIMING: Application frequency will depend on the environment to which Tick-EX EC Bioinsecticide is applied and the target insects' life cycle. Persistence of Tick-EX EC Bioinsecticide will generally be higher when incorporated into soil and higher in foliar applications in greenhouses than outdoor foliar applications.

Tick-EX EC Bioinsecticide may be used for foliar applications to control insects with a high reproductive potential. It is best to begin applying Tick-EX EC Bioinsecticide at early stages of population development. Repeat applications at 5- to 10-day intervals, matching application interval to insect and population. High insect populations of whiteflies may require 2- to 5-day intervals. Applications to leaf litter and turf may be done on a 4- to 6-week interval with an expected residual efficacy of a few months.

Applications of drenches to potting media may be done as appropriate to standard pest management practices and the product may remain efficacious for up to one year. When possible, application to soil should be done in advance of a target insect's life stage that will be passing through the first six inches of soil, with an expected residual efficacy of a few months. Although the penetration of Tick-EX EC Bioinsecticide into soil will vary greatly with soil type and level of irrigation, it is best to target populations as close to the surface as possible or time application of Tick-EX EC Bioinsecticide with a soil incorporation event.

PRE-HARVEST INTERVAL: Pre-harvest interval for Tick-EX EC Bioinsecticide is zero (0) days. Tick-EX EC Bioinsecticide may be applied up to the day of harvest.

SITES FOR USE

TERRESTRIAL NON-FOOD CROPS: Tick-EX EC Bioinsecticide can be used on the crops listed in Table 1 (greenhouse, nursery and outdoor sites including urban and suburban turf).

FOOD CROPS: Tick-EX EC Bioinsecticide can be used on the crops listed in Table 1 (including greenhouse, nursery and outdoor agricultural sites).

APPLICATION INSTRUCTIONS

MIXING INSTRUCTIONS: Shake well before using. Tick-EX EC Bioinsecticide may be applied using hand-held, ground and/or aerial spray equipment. Tick-EX EC Bioinsecticide contains emulsifiers and mixes readily in water. Fill spray tank with half of the desired amount of water and start agitation. Slowly add desired amount of Tick-EX EC Bioinsecticide to spray tank. Add remaining desired amount of water. Triple rinse empty Tick-EX EC Bioinsecticide container with water and add rinse water to spray tank. Continue agitation throughout spraying. Once open, use entire contents of bottle within 24 hours after mixing.

PLANT SAFETY: Tick-EX EC Bioinsecticide has been determined to be efficacious for the uses described on this label but has not been tested on all varieties of listed plant species for safety. Test Tick-EX EC Bioinsecticide on a small number of plants to check for potential damage before applying to a large number of plants. Do not apply on poinsettias after bract formation.

FOLIAR APPLICATION, HIGH VOLUME: Apply Tick-EX EC Bioinsecticide at a rate of 8 – 32 fl oz (½ pint to 1 quart) per 100 gallons of water in high volume sprays (0.5 to 2.5 teaspoons of Tick-EX EC Bioinsecticide per gallon of water). Mix well by external mixing, in-tank mixing, or pump circulation to form emulsion. [Do not apply at pressures above [200] [400] [600] PSI.] **Spray to wet all foliage, but avoid runoff.**

FOLIAR APPLICATION, LOW VOLUME: Apply 8 – 64 fl oz (½ pint to 2 quarts) of Tick-EX EC Bioinsecticide to one (1) acre. Follow spray equipment manufacturer's instructions for final spray volume to obtain adequate coverage. [Do not apply at pressures above [200] [400] [600] PSI.] **Do not apply through a thermal pulse fogger.**

DRENCH: [Add from 40 to 80 fluid ounces of Tick-EX EC Bioinsecticide to 100 gallons of drench] solution. [4 to 8 fluid ounces of Tick-EX EC Bioinsecticide to 10 gallons of drench solution.] **For pots:** drench application should be thoroughly watered-in without causing water to come out of the bottom of the pots – depending on the soil type and moisture, this will be around 8 ounces of mixed product per gallon pot. **For soil applications:** drench application should be thoroughly watered-in without causing water to move laterally – this will vary by soil type and moisture holding capacity at time of application. Applications should be targeted to move Tick-EX EC Bioinsecticide into the top 2 inches of soil.

FOLIAGE AND ROOT PLANT DIP: To prepare dip solution, thoroughly mix ½ to 1 fluid ounce of Tick-EX EC Bioinsecticide per gallon of water. Please note that dip solution must be used within 24 hours after mixing. When treating plants by the dip method, thoroughly wet all plant surfaces to be treated. Allow treated plant foliage to dry prior to potting and watering.

APPLICATION TO TURF: Apply 2 to 3 fluid ounces of Tick-EX EC Bioinsecticide to 1000 square feet in residential and institutional lawns and landscape perimeters. Applications for blacklegged ticks are to be focused on the border of manicured lawns and paths creating a minimum of a 9 foot border. Applications for more mobile ticks such as lonestar tick are to be applied on a wider area and include the entire lawn. Apply using a minimum of 4 gallons of water per 1000 square feet. Make initial applications in the spring before ticks become active and continue at 4- to 8-week intervals throughout their active season.

TANK MIX COMPATIBILITY: Tick-EX EC Bioinsecticide contains a fungal active. Do not mix Tick-EX EC Bioinsecticide with fungicides. Tick-EX EC Bioinsecticide is physically and biologically compatible with a wide range of pesticides and spray adjuvants. If adjuvants are required when applying Tick-EX EC Bioinsecticide in combination with other pesticides, contact your dealer or Novozymes Biologicals, Inc. for specific recommendations.

Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

CONTROLLING PESTICIDE DRIFT: Do not allow spray to drift from the application site and contact people, nontarget crops, aquatic and wetland areas, or animals.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use a fine or medium spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

For orchard/vineyard airblast applications, do not direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3 -10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 -- 10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

The applicator also must use all other measures necessary to control drift.

TABLE 1: CROPS ON WHICH TICK-EX EC BIOINSECTICIDE MAY BE USED:

CROP	PEST	APPLICATION	RATE
Cucurbits	thrips, whiteflies, mites	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Onions	thrips	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Celery, lettuce, spinach	thrips, whiteflies, mites, aphids, psyllids	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Peppers, tomatoes	thrips, whiteflies, mites, aphids, psyllids	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Grape, strawberry, cranberry, raspberry, blackberry Please note: For cranberry applications, do not apply to flooded fields.	thrips, whiteflies, mites, weevils, aphids, psyllids	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Potatoes	psyllids	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 64 fl.oz. [0.5 pt.- 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt.- 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Ornamental plants and grasses including, but not limited to: shrubs, vines, trees, lawn, bedding plants, poinsettia	thrips, weevils, mites, whiteflies	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	8 – 32 fl. oz. [0.5 pt.-1 qt.]/100 gallons, spray to wet but avoid runoff.
Turf: institutional, residential lawns (urban and suburban)	ticks	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz./10 gal.]
		foliar	2 to 3 fl. oz./ 1000 ft ²

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store TICK-EX EC in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING

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

WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully.

Novozymes Biologicals, Inc. warrants that at the time of the first sale of this product, it conforms to the chemical description on this label, and when used according to the label directions under normal growing conditions, it is reasonably fit for the purposes referred to above. To the extent consistent with applicable law, buyers/users of this product assume full risk for any use contrary to the specified directions. If this product does not perform as warranted above, customer's sole remedy for breach of warranty, to the extent consistent with applicable law, shall be replacement of the product or refund of the purchase price paid, at the option of Novozymes Biologicals, Inc.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTEE, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.

(Note: The following information will be affixed to the unit package)

TICK-EX EC BIOINSECTICIDE

[ABN: MET52[®] EC]

ACTIVE INGREDIENT – <i>Metarhizium anisopliae</i> Strain 52*	% w/w 11.0%
OTHER INGREDIENTS**	<u>89.0%</u>
Total	100.0%

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/gram of product

** Contains petroleum distillates

[REFER TO DIRECTIONS OF USE WITHIN THE BOOKLET]

See booklet for additional precautionary statements, the directions for use, application instructions and warranty.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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 further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 (NPIC Web site: www.npic.orst.edu). For emergencies, call the poison control center at 1-800-222-1222.	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

Batch Code: _____

Not for Use or Sale After: _____ (Date stamped/placed on the label will be 15 months after the date of manufacture)

Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store TICK-EX EC in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING

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

[Produced [For][By]:]
Novozymes Biologicals, Inc.
5400 Corporate Circle
Salem, VA 24153
1-888-744-5662 [1-800-245-4104]

EPA Registration Number: 70127-10
EPA Establishment Number: [70127-VA-001]
[73314-WI-002]
[85238-CAN-001]

Made in [USA] [Canada]
[www.bioag.novozymes.com]

[NOVOZYMES RETHINK TOMORROW] [LOGO]

Sublabel B: Residential/Home & Garden Use

(Front Panel)

TICK-EX EC BIOINSECTICIDE

[ABN: MET52® EC]

ACTIVE INGREDIENT – <i>Metarhizium anisopliae</i> Strain 52*	% w/w 11.0%
OTHER INGREDIENTS**	89.0%
Total	100.0%

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/gram of product

** Contains petroleum distillates

[REFER TO DIRECTIONS OF USE WITHIN THIS BOOKLET]

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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 further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 (NPIC Web site: www.npic.orst.edu). For emergencies, call the poison control center at 1-800-222-1222.	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

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

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

Batch Code: _____

Not for Use or Sale After: _____ (Date stamped/placed on the label will be 15 months after the date of manufacture)

Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

[Produced [For][By]:]
Novozymes Biologicals, Inc.
5400 Corporate Circle
Salem, VA 24153
1-888-744-5662 [1-800-245-4104]

EPA Registration Number: 70127-10
EPA Establishment Number: [70127-VA-001]
[73314-WI-002]
[85238-CAN-001]

Made in [USA] [Canada]
[www.bioag.novozymes.com]

[NOVOZYMES RETHINK TOMORROW] [LOGO]

ENVIRONMENTAL HAZARDS

This product is approved for residential (urban and suburban) outdoor terrestrial non-food and food uses. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300, day or night.

DIRECTIONS FOR USE

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

GENERAL

Tick-EX EC Bioinsecticide is composed of spores of the insect pathogenic fungus *Metarhizium anisopliae* strain F52. Once the product is sprayed onto foliage or drenched into the soil, insects that come into contact with the fungus will become infected. The spores of *Metarhizium anisopliae* attach to the surface of the insect, germinate and begin to grow. It will penetrate the exoskeleton of the insect and grow inside the insect, causing the insect to die. Under moderate temperatures, it usually takes 3 to 7 days, once the insect is exposed, for death to occur. At very cold or hot temperatures, death may occur more slowly. The fungal spores will be more persistent when incorporated in the soil, especially in potting media, than when applied to foliage.

Note: Tick-EX EC Bioinsecticide contains live spores that may be harmed by storage at high temperatures or held as a water suspension for more than 24 hours. Use entire contents of bottle once opened and do not hold mix for more than 24 hours. See storage and disposal section for more information.

APPLICATION TIMING:

It is best to begin applying Tick-EX EC Bioinsecticide at early stages of population development. Applications to turf may be done on a 4- to 6-week interval with an expected residual efficacy of a few months.

SITES FOR USE

Tick-EX EC Bioinsecticide can be used on turf, including institutional and residential lawns (urban and suburban).

Site	PEST	APPLICATION	RATE
Turf: institutional, residential lawns (urban and suburban)	ticks	drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz. / 10 gal]
		foliar	2 to 3 fl. oz./ 1000 ft ²

APPLICATION INSTRUCTIONS

MIXING INSTRUCTIONS: Shake well before using. Tick-EX EC Bioinsecticide may be applied using hand-held and ground spray equipment. Tick-EX EC Bioinsecticide contains emulsifiers and mixes readily in water. Fill spray tank with half of the desired amount of water and start agitation. Slowly add desired amount of Tick-EX EC Bioinsecticide to spray tank. Add remaining desired amount of water. Triple rinse empty Tick-EX EC Bioinsecticide container with water and add rinse water to spray tank. Continue agitation throughout spraying. Use entire contents of bottle once opened and do not hold mix for more than 24 hours.

PLANT SAFETY: Tick-EX EC Bioinsecticide has been determined to be efficacious for the uses described on this label but has not been tested on all varieties for safety. Test Tick-EX EC Bioinsecticide on a small area to check for potential damage before applying to a larger.

APPLICATION TO TURF: Apply 2 to 3 fluid ounces of Tick-EX EC Bioinsecticide to 1000 square feet in residential and institutional lawns and landscape perimeters. Applications for blacklegged ticks are to be focused on the border of manicured lawns and paths creating a minimum of a 9 foot border. Applications for more mobile ticks such as lonestar tick are to be applied on a wider area and include the entire lawn. Apply using a minimum of 4 gallons of water per 1000 square feet. Make initial applications in the spring before ticks become active and continue at 4- to 8-week intervals throughout their active season.

DRENCH: [Add from 40 to 80 fluid ounces of Tick-EX EC Bioinsecticide to 100 gallons of drench solution] [Add from 4 to 8 fluid ounces of Tick-EX EC Bioinsecticide to 10 gallons of drench solution]. Drench application should be thoroughly watered-in without causing water to move laterally – this will vary by soil type and moisture holding capacity at time of application. Applications should be targeted to move Tick-EX EC Bioinsecticide into the top 2 inches of soil.

TANK MIX COMPATIBILITY: Tick-EX EC Bioinsecticide contains a fungal active. Do not mix Tick-EX EC Bioinsecticide with fungicides. Tick-EX EC Bioinsecticide is physically and biologically compatible with a wide range of pesticides and spray adjuvants. If adjuvants are required when applying Tick-EX EC Bioinsecticide in combination with other pesticides, contact your dealer or Novozymes Biologicals, Inc. for specific recommendations.

Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

CONTROLLING PESTICIDE DRIFT: Do not allow spray to drift from the application site and contact people, nontarget crops, aquatic and wetland areas, or animals.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store TICK-EX EC in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

PESTICIDE DISPOSAL AND CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill container.

If empty:

Place container in trash or offer for recycling, if available.

If partly filled:

Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully.

Novozymes Biologicals, Inc. warrants that at the time of the first sale of this product, it conforms to the chemical description on this label, and when used according to the label directions under normal growing conditions, it is reasonably fit for the purposes referred to above. To the extent consistent with applicable law, buyers/users of this product assume full risk for any use contrary to the specified directions. If this product does not perform as warranted above, customer's sole remedy for breach of warranty, to the extent consistent with applicable law, shall be replacement of the product or refund of the purchase price paid, at the option of Novozymes Biologicals, Inc.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTEE, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.

(Note: The following information will be affixed to the unit package)

TICK-EX EC BIOINSECTICIDE

[ABN: MET52[®] EC]

	% w/w
ACTIVE INGREDIENT – <i>Metarhizium anisopliae</i> Strain 52*	11.0%
OTHER INGREDIENTS**	<u>89.0%</u>
Total	100.0%

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/gram of product

** Contains petroleum distillates

[REFER TO DIRECTIONS OF USE WITHIN THE BOOKLET]

See booklet for additional precautionary statements, the directions for use, application instructions and warranty.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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 further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 (NPIC Web site: www.npic.orst.edu). For emergencies, call the poison control center at 1-800-222-1222.	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

Batch Code: _____

Not for Use or Sale After: _____ (Date stamped/placed on the label will be 15 months after the date of manufacture)

Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store TICK-EX EC in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

PESTICIDE DISPOSAL AND CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill container.

If empty:

Place container in trash or offer for recycling, if available.

If partly filled:

Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

[Produced [For][By]:]
Novozymes Biologicals, Inc.
5400 Corporate Circle
Salem, VA 24153
1-888-744-5662 [1-800-245-4104]

EPA Registration Number: 70127-10
EPA Establishment Number: [70127-VA-001]
[73314-WI-002]
[85238-CAN-001]

Made in [USA] [Canada]
[www.bioag.novozymes.com]

[NOVOZYMES RETHINK TOMORROW] [LOGO]