

Specimen Label



GROUP 33 FUNGICIDE

LINEBACKER™ WDG

Agricultural Fungicide

ACTIVE INGREDIENT:

Aluminum tris (O-ethyl phosphonate)..... 80.0%

OTHER INGREDIENTS:..... 20.0%

TOTAL:..... 100.0%

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none">• Immediately call a poison control center or doctor for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-877-1737 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through the skin or inhaled. Causes moderate eye injury.
Avoid contact with skin, eyes or clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic and estuarine invertebrates. Drift and runoff may be hazardous to aquatic and estuarine organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

Do not contaminate water when disposing of equipment washwaters.

See inside for Directions for Use and Conditions of Sale and Warranty.

EPA Reg. No. 61842-9 EPA Est. No.

Manufactured for:
Tessengerlo Kerley, Inc.
2255 North 44th Street, Suite 300
Phoenix, AZ 85008-3279
1-800-525-2803



User Safety Recommendations

Users should:

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, and protective eyewear. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label before using this product. 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 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 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, waterproof gloves, shoes plus socks, and protective eyewear.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container and keep tightly closed. Store in a cool dry area.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by 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: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For control of diseases in the following crops:

Tree Fruits and Nuts	Small Fruits	Vegetables	Miscellaneous Crops
Avocado (Non-Bearing and Bearing)	Blueberries	Asparagus	Bananas
Citrus (Non-Bearing and Bearing)	Caneberry Subgroup	Brassica Crops	Ginseng
Macadamia Nuts	Cranberries	Cucurbit Crops	Hops
Pome Fruit (Non-Bearing and Bearing)	Grapes*	Leafy Vegetable Crops	Pineapple
Stone Fruit and Almond (Non-Bearing)	Strawberry	Onion (Dry Bulb)	
		Tomato	
*East of the Rocky Mountains Only			

DIRECTIONS FOR APPLICATION THROUGH SPRINKLER IRRIGATION SYSTEMS (CHEMIGATION)

Use of Linebacker through chemigation is NOT allowed in California, except for Citrus.

Apply this product only through sprinkler irrigation systems including mini-sprinkler, drip, solid set and center pivot. Do not apply this product through any other type of irrigation system.

PREPARATION: Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

APPLICATION INSTRUCTIONS: Prepare a suspension of **Linebacker** in the mixing tank by filling the tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation and add the recommended amount of **Linebacker** and then the remaining volume of water. Set the sprinkler to deliver 0.1 to 0.3 inch of water per acre, start the sprinkler and uniformly inject the **Linebacker** suspension into the irrigation water line at the desired rate per acre. The suspension should be injected into the main line ahead of a right angle turn using a positive displacement pump to insure adequate mixing. You should contact a State Extension Service specialist, equipment manufacturer's representative or other expert if you have any questions regarding calibration.

When treating using a Mini-Sprinkler or Drip Irrigation System: Once the application is completed, further field irrigation of the treated area should be avoided for 24 to 48 hours.

When treating using a Solid Set or Center Pivot Irrigation Systems: Once the application is completed, further field irrigation over the treated area should be avoided until foliage is dry to prevent washing the chemical off the crop.

GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

- Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e. g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do NOT apply when wind speed favors drift beyond the area intended for treatment, or when system connection or fittings leak, or when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non uniform distribution of treated water.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.
- A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.

GENERAL APPLICATION INSTRUCTIONS FOR FOLIAR APPLICATIONS

Linebacker provides effective systemic control of various diseases when used according to the label directions.

MIXING INSTRUCTIONS

1. Prior to adding **Linebacker**, fill the spray tank with 1/4 - 1/2 of the required volume of water.
2. Add **Linebacker** slowly to the tank and agitate by hydraulic or mechanical means.

NOTE: Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** should be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds. Slowly add alkaline buffering agent (if needed).

CAUTION: When Potassium Carbonate is used as a buffer Carbon Dioxide (CO₂) gas is released during the buffering process. The spray tank must NOT be sealed until the CO₂ release associated with the reaction subsides (approximately 5 minutes).

3. Continue to fill the tank with water to the desired volume while maintaining agitation.
4. Maintain agitation while applying.

GENERAL APPLICATION INSTRUCTIONS FOR TRUNK SPRAYS AND PAINTS

1. Mix **Linebacker** with a small volume of water using the specific rates and gallonage specified in the citrus and stone fruit sections of this label.
2. Using sufficient volume to cover the entire area to be treated, apply the mixture to the wound area as a spray or paint on the limbs or trunk of citrus or stone fruit trees.

LINEBACKER COMPATIBILITY WITH OTHER PRODUCTS:

Linebacker has been found to be compatible with most agricultural products; however, crop sensitivity to mixtures may vary. In particular, foliar fertilizers and copper products combined with **Linebacker** may cause phytotoxicity in various crops. If these combinations or others have not been used before, do not tank mix without first testing the safety of the combination with respect to both compatibility and crop phytotoxicity.

Spray adjuvants such as stickers, spreaders and wetting agents are not recommended for use with **Linebacker**. However, if an adjuvant will be mixed with **Linebacker**, it should be tested prior to use for compatibility. Because of **Linebacker's** acidic nature, do not tank mix with acid-type compatibility spray adjuvants such as Buffit[®] Spray-aide or Triton[®] AG-44M, or with adjuvants designed to enhance pesticide penetration such as Herbex[®] or Induce[®].

Physical compatibility with **Linebacker** should be checked when mixing with soluble concentrate or "flowable" formulation pesticides such as Bravo[®] 720 and Rovral[®] 4F. To test compatibility, add the correct proportions of each product and water into a clear container, thoroughly mix and then let stand for 3-5 minutes. If the mixture remains in suspension or can be easily remixed, the products are considered compatible. Buffering as described in the Mixing Instructions section may increase compatibility.

To determine if a combination is phytotoxic to a specific crop, apply the mixture to a few plants or trees and then evaluate 3-7 days later for visual effects.

APPLICATION INSTRUCTIONS:

Apply **Linebacker** with sufficient water volumes to obtain complete foliage coverage; the gallonage needed will vary by crop and growth stage. Do not apply **Linebacker** in less than 20 gal. /Acre when applying to vegetables and small fruit by ground. Aerial applications for all labeled crop uses must not be made using less than 10 gallons per acre. To insure good coverage of tree fruit, spray to wet.

AVOCADO – NON-BEARING

(Non-bearing trees are those that will not produce marketable fruit for 12 months after the last **Linebacker** application)

Linebacker will control avocado root rot caused by *Phytophthora cinnamomi* and avocado canker caused by *P. citricola* when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT allow livestock to graze on the floor of treated groves.
- Do NOT exceed 100 GPA for foliar applications.
- Do NOT cut cover crops for feed.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Canker (<i>Phytophthora citricola</i>)	Paint or Trunk Spray	2.5-5.0 / 5 gal.	<p>Mix the desired amount of Linebacker with 5 gallons of water and apply to the trunk lesion in a sufficient volume to thoroughly wet the entire lesion.</p> <p>If no lesion is present, the application must be made from the soil line up the trunk approximately two feet.</p> <p>If trunk lesions are present, the higher rate must be used.</p> <p>Nursery tree resets and new plantings must be treated at the time of planting.</p>
Phytophthora Root Rot (<i>Phytophthora cinnamomi</i>)	Drench	5.0 oz. / 10 gal.	2-3 days prior to transplanting, apply 1 quart of solution to the sleeve or pot of each tree.
	Foliar	5.0 / 100 gal.	Begin application at transplanting or the start of the growing season and continue for up to 4 applications per year at 60 day intervals. Spray to run-off.

AVOCADO – BEARING

Linebacker will control avocado root rot caused by *Phytophthora cinnamomi* and avocado canker caused by *P. citricola* when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within 12 hours or less of harvest.
- Do NOT exceed 500 GPA for foliar applications.
- Do NOT apply more than 5.0 lbs. of **Linebacker** per acre per application.
- Do NOT exceed 20 lbs. of **Linebacker** per acre per year.
- Do NOT allow livestock to graze on the floor of treated groves.
- Do NOT cut cover crops for feed.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Canker (<i>Phytophthora citricola</i>)	Paint or Trunk Spray	2.5-5.0 / 5 gal.	<p>Mix the desired amount of Linebacker with 5 gallons of water and apply to the trunk lesion in a sufficient volume to thoroughly wet the entire lesion.</p> <p>If no lesion is present, the application must be made from the soil line up the trunk approximately two feet.</p> <p>If trunk lesions are present, the higher rate must be used.</p> <p>Nursery tree resets and new plantings must be treated at the time of planting.</p>
Phytophthora Root Rot (<i>Phytophthora cinnamomi</i>)	Foliar	5.0 / Acre	Begin application at the start of the growing season and repeat every 60 days. Spray to run-off.
		1.0 / 100 gal.	<p>Begin application at the start of the growing season and repeat every 60 days. Spray to run-off.</p> <p>This volumetric concentration is derived from a per acre foliar application rate of 5 lbs. of Linebacker diluted in 500 gals of water.</p>

Note: It is necessary to know the number of gallons of water needed to spray one acre of trees to the point of drip in order to apply the correct amount of product. Conduct a test if the gallonage is unknown and if you do not know how to conduct such a test with your specific equipment, you must seek assistance from your equipment dealer or Cooperative Extension Service.

CITRUS – NON-BEARING

(Non-bearing trees are those that will not produce marketable fruit for 12 months after the last **Linebacker** application)

Linebacker will control foot rot, root rot and gummosis caused by *Phytophthora* spp. when applied in conjunction with good cultural management practices. **Linebacker** may be applied by ground, air or chemigation.

Use Precautions:

- Any combination of labeled application methods can be used, however, do NOT exceed a total of four applications or 20 lbs. of product per acre per year.
- Do NOT exceed 100 GPA for foliar applications.
- Do NOT graze livestock in treated groves.
- Do NOT feed forage from treated groves.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkali buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine citrus sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Root Rot or Gummosis (<i>Phytophthora</i> spp.)	Paint or Trunk Spray	2.5-5.0 / 5 gal.	Mix the desired amount of Linebacker with 5 gallons of water and apply to the trunk lesion in a sufficient volume to thoroughly wet the entire lesion. If no lesion is present, the application must be made from the soil line up the trunk approximately two feet. If trunk lesions are present, the higher rate must be used. Nursery tree resets and new plantings must be treated at the time of planting.
	Chemigation	5.0 / Acre	Start applications when conditions are favorable for disease development. Spray until wet for foliar applications.
	Foliar	5.0 / 100 gal.	For chemigation, during a scheduled irrigation continuously inject Linebacker .
Phytophthora Foot and Root Rot (<i>Phytophthora</i> spp.)	Root Dip	3.0 / 100 gal.	Mix Linebacker thoroughly in the desired volume of water. Prior to planting in the field dip the entire root system for 30-60 minutes.

CITRUS – BEARING

When applied in conjunction with good cultural practices **Linebacker** will control foot rot, root rot, gummosis, and fruit brown rot caused by *Phytophthora* spp. as well as ice-nucleating bacteria (California only), and suppresses Alternaria Brown Spot (Florida only).

Note: Controlling ice-nucleating bacteria may provide some protection against light frost; however, **Linebacker** is **not recommended** for use in areas where severe frost may occur.

Use Precautions:

- Do NOT apply within 30 days of harvest.
- Do NOT exceed a total of four applications or 20 lbs. of product per acre per year.
- Do NOT exceed 500 GPA for foliar applications.
- **Linebacker** may be applied by ground, air or chemigation.
- Do NOT graze livestock in treated groves.
- Do NOT feed forage from treated groves.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine citrus sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.

Note: In order to apply the correct amount of **Linebacker**, you must know the number of gallons of water needed to spray one acre of trees to the point of drip. If you do not know this gallonage you must conduct a test to determine it. If you do not know how to conduct such a test with your equipment you must seek assistance from your equipment dealer or Cooperative Extension Service.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Root Rot or Gummosis (<i>Phytophthora</i> spp.)	Trunk Spray or Paint	2.5-5.0 / 5 gal.	Mix the desired amount of Linebacker with 5 gallons of water and apply to the trunk lesion in a sufficient volume to thoroughly wet the entire lesion. If no lesion is present, the application must be made from the soil line up the trunk approximately two feet. If trunk lesions are present, the higher rate must be used.
Phytophthora Foot and Root Rot Brown Rot (<i>Phytophthora</i> spp.)	Foliar	5.0 / Acre	Apply as a spray to wet when conditions favor disease development. (If you are unsure about whether these conditions exist, check with your Cooperative Extension Service.)
		1.0 / 100 gal.	Apply as instructed above. This volumetric concentration is derived from a per acre foliar application rate of 5 lbs. of Linebacker diluted in 500 gal. of water.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Foot and Root Rot (<i>Phytophthora</i> spp.)	Chemigation	5.0 / Acre	Begin application when conditions favor disease development. (If you are unsure about whether these conditions exist, check with your Cooperative Extension Service.) Inject Linebacker continuously during a scheduled irrigation.
Alternaria Brown Spot * (<i>Alternaria</i> spp.) Florida only	Foliar	5.0 / Acre	Linebacker suppresses <i>Alternaria</i> spp. that cause Brown Spot. The first application must be applied in the spring at the first sign of new growth. A second and third application must follow at 30-45 day intervals. Apply in sufficient water and direct spray to insure thorough coverage of the susceptible foliage and fruit.
		1.0 / 100 gal.	Apply as instructed above. This volumetric concentration is derived from a per acre foliar application rate of 5 lbs. of Linebacker diluted in 500 gal. of water.
Ice-nucleating bacteria (<i>Pseudomonas syringae</i> , <i>P. fluorescens</i> , <i>Erwinia herbicola</i>) California only	Foliar	5.0 / Acre	Apply as a spray in mid November (this allows sufficient time for the ice nucleating bacteria to decompose before frost conditions are likely). Thorough coverage is required.(See note under 'Restrictions and Limitations'.)
		1.0 / 100 gal.	Apply as instructed above. This volumetric concentration is derived from a per acre foliar application rate of 5 lbs. of Linebacker diluted in 500 gal. of water.
* Suppression Only			

MACADAMIA NUTS‡

‡ **Do NOT use on Macadamia Nuts in California, not registered for use.**

Linebacker will control Phytophthora Raceme Blight in Macadamia Nuts, when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply more than 30 lbs. of **Linebacker** per acre per growing season.
- Do not apply within 7 days of harvest.
- Do not allow livestock to graze on green forage or stubble.
- Do not utilize hay or straw for animal feed or bedding.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine macadamia nut sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Raceme Blight	Foliar	7.5 / Acre	Apply when first signs of disease appear using sufficient water to thoroughly wet the foliage. Apply as long as conditions favor disease development at 21 day intervals.

POME FRUIT (Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince) – **NON-BEARING**

(Non-bearing trees are those that will not produce marketable fruit for 12 months after the last **Linebacker** application)

Linebacker controls collar and root rot caused by *Phytophthora* spp. and when used in a program with other registered bactericides and recommended sanitation measures, will aid in the control of Fire Blight caused by *Erwinia amylovora*.

Apply early in the season when treating for Fire Blight and Blister Spot control.

Delay until 30 days after the last Fire Blight or Blister Spot application when treating for *Phytophthora* spp.

Note: The use of **Linebacker** on Pome Fruit is restricted to protect endangered fresh water mollusks and their habitat.

Use Precautions:

- Do NOT apply more than 5.0 lbs. of **Linebacker** per acre per application.
- Do NOT apply more than 20 lbs. of product per acre per season.
- Do NOT apply more than 3.75 lbs. of product (3 lbs. ai) per acre per application in the following counties:

IL:	Adams, Pike	VA:	Botetourt, Wise
MN:	Washington, Winowa	VT:	Windsor
OH:	Washington, Wayne	WI:	Crawford, Richland, Vernon
TN:	Cocke	WV:	Monroe

- Do NOT graze livestock on floor of treated orchards.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Fire Blight (<i>Erwinia amylovora</i>)	Foliar	2.5-5.0 / 100 gal.	Apply in the spring when conditions are favorable for disease development and reapply at 4-7 day intervals for as long as conditions favor disease development. Thorough coverage is required and for best results, adequate foliage must be available for absorption. To reduce inoculum in newly forming bud tissue, an additional application in the fall prior to leaf drop may be made.

Phytophthora Collar and Root Rot (<i>Phytophthora</i> spp.)	Root Dip	3.0 / 100 gal.	Mix Linebacker in the desired volume of water and dip the entire root system for 30-60 minutes prior to planting in the field.
	Foliar	2.5-5.0 / 100 gal.	Apply Linebacker when conditions favor disease development and reapply on a 30-60 day interval as necessary. Thorough coverage is required. For moderate disease pressure, apply Linebacker using either 3-4 times at a rate of 5.0 lbs. of product/100 gal. on a 60 day spray interval or 6-8 times at a rate of 2.5 lbs. of product/100 gals on a 30 day interval. NOTE: Nursery tree resets and new plantings must be treated after leaf emergence.

POME FRUIT [Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince] - **BEARING**

Linebacker applied as part of a complete disease control program will provide effective control of collar and root rot caused by *Phytophthora* spp. and Apple Blister Spot caused by *Pseudomonas syringae*. **Linebacker** used in a program with other registered bactericides and recommended sanitation measures aids in the control of Fire Blight caused by *Erwinia amylovora*.

Use Precautions:

- Do NOT apply within 14 days of harvest.
- Do NOT apply within 2-3 weeks of leaf senescence.
- Do NOT exceed 500 GPA.
- Do NOT apply more than 5.0 lbs. of **Linebacker** per acre per application.
- Do NOT apply more than 20 lbs. of product per acre per season.
- Do NOT apply more than 3.75 lbs. of product (3 lbs. ai) per acre per application in the following counties:

IL:	Adams, Pike	VA:	Botetourt, Wise
MN:	Washington, Winowa	VT:	Windsor
OH:	Washington, Wayne	WI:	Crawford, Richland, Vernon
TN:	Cocke	WV:	Monroe

- Do NOT graze livestock on floor of treated orchards.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Fire Blight (<i>Erwinia amylovora</i>)	Foliar	2.5-5.0 / Acre	Apply in the spring when conditions are favorable for disease development and reapply at 4-7 day intervals for as long as conditions favor disease development. Thorough coverage is required and for best results, adequate foliage must be available for absorption. To reduce inoculum in newly forming bud tissue, an additional application in the fall prior to leaf drop may be made.
		0.5-1.0 / 100 gal.	Follow the application instructions above. NOTE: This is the same concentration as 2.5-5 lbs. of Linebacker diluted in 500 gal. of water.
Apple Blister Spot (<i>Pseudomonas syringae</i>)	Foliar	2.5-5.0 / Acre	Begin applications when blossoms are at the pink stage and make additional applications at 7 day intervals as long as conditions favor Blister Spot development.
		0.5-1.0 / 100 gal.	Follow the application instructions above. NOTE: This is the same concentration as 2.5-5 lbs. of Linebacker diluted in 500 gal. of water.

Phytophthora Collar and Root Rot (<i>Phytophthora</i> spp.)	Foliar	2.5-5.0 / Acre	Apply Linebacker when conditions favor disease development and reapply on a 30-60 day interval as necessary. Thorough coverage is required. For moderate disease pressure, apply Linebacker using either 3-4 times at a rate of 5.0 lbs. of product/100 gal. on a 60 day spray interval or 6-8 times at a rate of 2.5 lbs. of product/100 gal. on a 30 day interval.
		0.5-1.0 / 100 gal.	Follow the application instructions above. NOTE: This is the same concentration as 2.5-5 lbs. of Linebacker diluted in 500 gal. of water.

STONE FRUIT [Apricot, Cherry (sour and sweet), Nectarine, Peach, Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot and Prune (Fresh)] – **NON-BEARING**

and ALMONDS – NON-BEARING

(Non-bearing trees are those that will not produce marketable fruit for 12 months after the last **Linebacker** application)

Linebacker controls collar and root rot caused by *Phytophthora* spp. and Almond pruning-wound canker caused by *Phytophthora syringae* when applied in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply more than 5.0 lbs. of **Linebacker** per acre per application.
- Do NOT exceed 20 lbs. of product per acre per year.
- Do NOT exceed four applications per year.
- Do NOT exceed 100 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Collar and Root Rot (<i>Phytophthora</i> spp.)	Foliar	5.0 / 100 gal.	Apply when conditions favor disease development and reapply on a 60 day interval as necessary. NOTE: Nursery tree resets and new plantings must be treated after leaf emergence.
Almond pruning-wound canker (<i>Phytophthora syringae</i>)	Spray or Paint	3.0-5.0 / 100 gal.	Apply by spraying or painting the pruning wound area in a sufficient volume to thoroughly wet the entire wound surface. Use the higher rates listed for severe disease conditions such as active canker lesion. For small volume applications, mix 0.5-0.8 oz. (3.0-4.5 level tablespoons) of product per gallon of water (equivalent to 3-5 lbs. of product per 100 gals).

BLUEBERRY†

† **Do NOT use on Blueberries in California, not registered for use.**

Linebacker will control Phytophthora root rot (*Phytophthora* spp.) of blueberries when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within 12 hours of harvest.
- Do NOT exceed 20 lbs. of product per acre per year.
- Do NOT exceed four applications per year.
- Do NOT apply in less than 10 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Root Rot (<i>Phytophthora</i> spp.) Anthracnose Fruit Rot (<i>Colletotrichum gloeosporioides</i>) Alternaria Fruit Rot* (<i>Alternaria tenuissima</i>) Phomopsis Canker* (<i>Phomopsis</i> spp.)	Foliar	5.0 / Acre	Apply at the pink bud stage in the spring and reapply on a 14-21 day interval being sure to use a sufficient volume of water for good coverage.
*Suppression Only			

CANEBERRIES

[Blackberry, Loganberry, Red and Black Raspberry and cultivars and / or hybrids] (*Rubus* spp.)

Linebacker will control *Phytophthora* root rot (*Phytophthora* spp.) of caneberries when used in conjunction with good cultural management practices.

Use Pesticides:

- Do NOT apply within 60 days of harvest.
- Make four applications per year when severe disease pressure is present (check with your Cooperative Extension Service if you are unsure about whether these conditions exist).
- The last application in the fall must be made at least 30 days prior to leaf drop.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Root Rot (<i>Phytophthora</i> spp.)	Foliar	5.0 / Acre	<p>Linebacker applications must begin when plants produce 1-3 inches of new growth when applying to new plantings.</p> <p>For established plantings, start applications when conditions favor disease development and be sure to use sufficient water to thoroughly wet the foliage.</p> <p><u>West of the Rocky Mountains</u></p> <p>Fall Application: Begin applications when conditions favor disease development and repeat on a 3-4 week schedule as necessary.</p> <p>Spring Application: Apply after bud break (1-3 inches of new growth) followed by a second spray in 3-4 weeks.</p> <p><u>East of the Rocky Mountains</u></p> <p>Apply after bud break (1-3 inches new growth) in the spring and continue applications on a 45-60 day schedule (up to a maximum of four sprays during the growing season).</p>

STRAWBERRY

Linebacker will control Red Stele caused by *Phytophthora fragariae* and Leather Rot caused by *P. cactorum* when used in conjunction with good cultural management practices.

NOTE: The use of **Linebacker** on Strawberries is restricted to protect endangered fresh water mollusks and their habitat.

Use Precautions:

- Do NOT apply within 12 hours of harvest.
- Do NOT apply by fixed wing or rotary aircraft.
- Do NOT exceed 30 lbs. of product per acre per season.
- Do NOT apply more than 3.75lbs. of product (3 lbs. ai) per acre per application in the following counties:

AR:	White	MN:	Houston, Washington
IL:	Whiteside	MS:	Monroe
IA:	Scott	MO:	Franklin, Jefferson
IN:	Knox	NH:	Cheshire, Sullivan
KY:	Campbell, Marshall, Rockcastle, Todd, Warren	NC:	Granville, Johnston
LA:	Livingston, Rapides	OH:	Washington
MD:	Caroline, St. Mary's	WI:	Iowa, St. Croix, Trempealeau

- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine strawberry sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Red Stele (<i>Phytophthora fragariae</i>)	Dip	2.5 / 100 gal.	Apply to roots and crowns for 15-30 minutes and plant within 24 hours after dipping. Dip applications may be used for both annual and perennial varieties of strawberries.
	Foliar	2.5-5.0 / Acre	<p>Annuals: Apply 14-21 days after planting and repeat applications on a 30-60 day interval for as long as conditions favor disease development.</p> <p>Perennials: Apply in the spring when the plants start to grow actively. Make additional applications at a 30-60 day interval if disease conditions persist or reoccur. Use the higher rates, shorter reapplication intervals and maximum number of reapplications if growing Red Stele susceptible varieties or if disease pressure is heavy.</p>

Leather Rot (<i>Phytophthora cactorum</i>)	Foliar	2.5-5.0 / Acre	Apply between 10% bloom and early fruit set and reapply on a 7-14 day interval for as long as conditions favor disease development. When disease pressure is heavy use the shorter time interval, higher rates, and maximum number of applications.
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ASPARAGUS (CALIFORNIA ONLY)

Linebacker controls Asparagus Spear Slime and Crown Rot caused by *Phytophthora* spp.

Use Precautions:

- Do NOT apply within 110 days of harvest.
- Do NOT exceed 50 GPA.
- Do not apply to ferns that are beginning to senesce.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Asparagus Spear Slime and Crown Rot (<i>Phytophthora</i> spp.)	Foliar	5.0 / Acre	Apply Linebacker once per season to fully expanded asparagus ferns. Thorough coverage is required.

BRASSICA CROPS

[Broccoli, Broccoli Raab (rapini), Brussels Sprouts, Cabbage, Chinese Broccoli (gai lon), Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens]

Linebacker controls Downy Mildew caused by *Peronospora parasitica* when applied in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within three days of harvest.
- Do NOT exceed seven applications per season.
- Do NOT apply in less than 10 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Downy Mildew (<i>Peronospora parasitica</i>)	Foliar	2.0-5.0 / Acre	<p>Apply Linebacker when conditions favor disease development and reapply on a 7-21 day interval as necessary. Be sure to use a sufficient volume of water for good coverage.</p> <p>The lower rates listed may be used when tank mixed with another fungicide labeled for downy mildew control (other than copper, see use precaution above).</p> <p>When used alone, apply 3.0-5.0 lbs/Acre. For moderate to high disease pressure, use the higher rates and shorter reapplication interval.</p>

CUCURBIT CROPS

[Chinese Waxgourd, Citron Melon, Cucumber, Gherkin, Gourd (Edible),
Momordica spp. (Balsam Apple, Balsam Pear, Bitter Melon, Chinese Cucumber),
Muskmelon, Pumpkin, Summer and Winter Squash, Watermelon]

Linebacker controls Downy Mildew (*Pseudoperonospora cubensis*) and Phytophthora Root and Fruit Rot (*Phytophthora* spp.) when applied in conjunction with good cultural management practices.

Linebacker applied for Downy Mildew or Phytophthora Root and Fruit Rot control will provide moderate suppression of whitefly (*Bemisia* spp.) populations. **Linebacker** will only suppress whitefly populations; in most locations where whiteflies are a problem, insecticide applications will also be required to minimize whitefly damage.

Note: **Linebacker** use on Cucurbits is restricted to protect endangered fresh water mollusks and their habitat.

Use Precautions:

- Do NOT apply within 12 hours of harvest.
- Do NOT exceed seven applications per season.
- Do NOT apply more than 3.75 lbs. of product (3 lbs. ai) per acre per application in the following counties:

AL:	Hale, Jackson, Lauderdale, Marshall, Morgan, Washington	MN:	Chisago, Washington
AR:	Clay, Craighead, Lawrence, Mississippi, St. Francis, Saline, Sharp, White, Woodruff	MS:	Monroe
IL:	Gallatin, Mercer, Whiteside	MO:	Butler, Cedar, Dunklin, Franklin, Jefferson, Ripley, St. Louis
IA:	Allamakee, Louisa, Muscatine	NC:	Franklin, Granville, Johnston, Nash, Pitt
IN:	Knox	OH:	Williams, Washington
KY:	Hart, Logan, Marshall, Warren	TN:	Blount, Lincoln
LA:	Rapides, St. Helena	VA:	Botetourt
MD:	Caroline	VT:	Windsor

- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
<p>Downy Mildew (<i>Peronospora cubensis</i>)</p> <p>Phytophthora Root and Fruit Rot (<i>Phytophthora</i> spp.)</p>	<p>Foliar</p>	<p>2.0-5.0 / Acre</p>	<p>Apply when conditions favor disease development and repeat applications on a 7-14 day interval. Be sure to use a sufficient volume of water for good coverage.</p> <p>The lower rates listed may be used when tank mixed with another fungicide labeled for downy mildew control (other than copper, see use precaution above).</p> <p>When used alone, apply 3.0-5.0 lbs/Acre. For moderate to high disease pressure, use the higher rates and shorter reapplication interval.</p>

LEAFY VEGETABLES

(except Brassica vegetables) [Amaranth, Arugula (Roquette), Cardoon, Celery, Celery (Chinese), Celtuce, Chervil, Chrysanthemum (Edible Leaved, Garland), Corn Salad, Cress (Garden, Upland), Dandelion, Dock (Sorrel), Endive (Escarole), Fennel (Florence), Lettuce (Head and Leaf), Orach, Parsley, Purslane (Garden, Winter), Radicchio (Red Chicory), Rhubarb, Spinach, Spinach (New Zealand and Vine), Swiss Chard]

Linebacker controls Downy Mildew (*Bremia lactucae*, *Peronospora* spp.) on leafy vegetables and White Rust (*Albugo occidentalis*) on spinach when applied in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within three days of harvest.
- Do NOT exceed seven applications per season.
- Do NOT apply in less than 10 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Downy Mildew (<i>Bremia lactucae</i> , <i>Peronospora</i> spp.) White Rust (Spinach Only) (<i>Albugo occidentalis</i>)	Foliar	2.0-5.0 / Acre	Apply Linebacker when conditions favor disease development and repeat applications on a 7-21 day interval as necessary. Be sure to use a sufficient volume of water for good coverage. The lower rates listed may be used when tank mixed with another fungicide labeled for downy mildew control (other than copper, see use precaution above). When used alone, apply 3.0-5.0 lbs/ Acre. For moderate to high disease pressure, use the higher rates and shorter reapplication interval.

ONIONS (DRY BULB):

When applied in a preventive program in conjunction with good cultural management practices, **Linebacker** controls Downy Mildew (*Peronospora destructor*) and suppresses Purple Blotch (*Alternaria porri*) on onion.

Physical compatibility with **Linebacker** must be checked when mixing with soluble concentrate or “flowable” formulation pesticides such as Bravo® 720 and Rovral® 4F. To test for compatibility, add the correct proportions of each product to be mixed and water to a clear container and thoroughly mix. Let stand for 3-5 minutes and then check; if the mixture remains in suspension or can be readily remixed, the products are considered compatible. Buffering as described in the use precaution for copper compounds below may increase compatibility.

Use Precautions:

- Do NOT apply within seven days of harvest.
- Do NOT exceed seven applications per season.
- Do NOT apply in less than 10 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessengerlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine onion sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Downy Mildew (<i>Peronospora destructor</i>) Purple Blotch (<i>Alternaria porri</i>)	Foliar	2.0-3.0 / Acre	Linebacker must be used in a preventive disease control program for best results. Apply when conditions favor disease development and reapply on a 7-14 day interval as necessary. If disease is already present, apply Linebacker at the 3.0 lbs. of product/Acre rate and the seven day time interval.

TOMATO

Linebacker controls damping off caused by *Pythium* spp. and root rots caused by *Phytophthora* spp. in tomatoes when used in conjunction with good cultural management practices.

Note: **Linebacker** use on tomato is restricted to protect endangered fresh water mollusks and their habitat.

Use Precautions:

- Do NOT apply **Linebacker** on tomatoes in the following counties:

AL:	Jackson, St. Clair	LA:	Rapides
CA:	Sonoma	MD:	Caroline, Queen Anne's, St. Mary's, Talbot
IA:	Louisa, Muscatine, Scott	MO:	Butler, Jefferson, St. Louis
IL:	Mercer, Rock Island, White, Whiteside	NC:	Granville, Johnston,
IN:	Knox	OH:	Williams
KY:	Campbell, Green, Kenton, Wayne	TN:	Cocke, Davidson, Grainger, Gundy, Hamilton, Knox, Meigs, Rhea, Sumner

- Do NOT apply within 14 days of harvest.
- Do NOT exceed 20 lbs. of product per acre per season.
- Do NOT apply in less than 10 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine tomato sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Root Rot (<i>Phytophthora</i> spp.) Damping Off (<i>Pythium</i> spp.)	Foliar	2.0-5.0 / Acre	For direct seeded tomatoes, apply at the 2-4 leaf stage of growth or immediately after transplanting to the field and reapply on a 7-14 day interval if conditions are favorable for disease development. Be sure to apply in a sufficient volume of water to wet the entire plant canopy. For moderate disease pressure, use the higher rates and shorter spray interval.

BANANA†

† **Do NOT use on Banana in California, not registered for use.**

Linebacker will control the root disease complex of Banana when used in conjunction with good cultural management practices

Use Precautions:

- Foliar applications must be made in a minimum of 5 gallons/Acre.
- The preharvest interval is 0 days (PHI=0) for foliar applications.
- The preharvest interval is 1 day (PHI=1) for pseudostem injections.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Root Disease Complex	Foliar	6.0 / Acre per application	Using a minimum application interval of three months, make a maximum of four applications spread throughout the year.
	Pre-flowering pseudostem injection	6.0 / Acre per year	Determine the per-tree dosage by dividing the per acre rate by the number of trees per year. Dissolve the per-tree dosage in water and inject into the pseudostem of plants about to flower. NOTE: Using a self-refilling injector such as a Duomat™ Injector is recommended.
	Post harvest pseudostem (stump) injection	6.0 / Acre per year	Determine the per-tree dosage by dividing the per acre rate by the number of trees per year. Dissolve the per-tree dosage in water and inject into the pseudostem of plants left after harvesting the banana bunch. Injections must be made approximately 3 feet above ground and within one week after harvest. NOTE: Using a self-refilling injector such as a Duomat™ Injector is recommended.

GINSENG

Linebacker controls Phytophthora Foliar and Root Rot (*Phytophthora cactorum*) and suppresses Alternaria Leaf Blight (*Alternaria panax*) when applied in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within 31 days of harvest.
- Do NOT exceed nine applications per season.
- Do NOT apply in less than 100 GPA.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine ginseng sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Phytophthora Foliar and Root Rot <i>(Phytophthora cactorum)</i> Alternaria Leaf Blight* <i>(Alternaria panax)</i>	Foliar	5.0 / 100 gal.	Apply in the spring when conditions become favorable for disease development and repeat applications on a seven day interval as necessary.
*Suppression Only			

HOPS‡

‡ **Do NOT use on Hops in California, not registered for use.**

Linebacker will control Hop Downy Mildew (*Pseudoperonospora humuli*), when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within 24 days of harvest.
- Do NOT apply more than 10 lbs. of product/Acre per growing season.
- Do NOT feed hop refuse to animals.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine hop sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Hop Downy Mildew (<i>Pseudoperonospora humili</i>)	Foliar	2.5 / Acre	<p>When conditions are favorable for disease development, apply as a directed foliar spray using ground equipment only, being sure to use a sufficient volume of water to completely cover the foliage.</p> <p>Applications must be made on the following schedule:</p> <ol style="list-style-type: none"> 1 - When shoots are 6-12 inches high; 2 - After training when vines are 5-6 feet tall; 3 - Approximately three weeks after the second application; and, 4 - During bloom.

PINEAPPLE

Linebacker controls Heart Rot (*Phytophthora parasitica*) in pineapple when used in conjunction with good cultural management practices.

Use Precautions:

- Do NOT apply within three months of harvest.
- Do NOT exceed six foliar applications.
- Do NOT exceed 400 GPA for foliar applications.
- Do NOT tank-mix with copper compounds. If products containing copper are tank-mixed with **Linebacker**, or if unbuffered **Linebacker** is applied to foliage with copper residues, Tessenderlo Kerley, Inc. has determined that phytotoxicity from solubilized copper may occur. The pH of **Linebacker** must be raised to 6.0 or above with the addition of an alkaline buffer such as Potassium Carbonate (3 lbs. Potassium Carbonate to 5 lbs. **Linebacker**) or DiAmmonium Phosphate (5 lbs. DiAmmonium Phosphate to 5 lbs. **Linebacker**) when applying prior to or after copper compounds.
- Adjuvants that enhance pesticide penetration may cause phytotoxicity when mixed with **Linebacker**.
- Mixing **Linebacker** with surfactants or foliar fertilizers is NOT recommended. Determine pineapple sensitivity to a particular combination by spraying a small area of foliage and fruit and evaluating for adverse effects 3-7 days later.

Disease Controlled	Application Method	Application Rate (lbs. of product)	Application Instructions
Heart Rot <i>(Phytophthora parasitica)</i>	Dip	2.5 / 100 gal.	Apply as a pre-plant dip immediately prior to planting. NOTE: 100 gallons is intended to treat the number of slips required to plant one acre.
	Foliar	3.75 / 100 gal.	Apply to established plants when environmental conditions favor disease development or are anticipated and repeat applications at three month intervals. Be sure to apply in sufficient water for thorough coverage

CONDITIONS OF SALE – LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Tessenderlo Kerley, Inc., or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Tessenderlo Kerley, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use, subject to the factors noted above which are beyond the control of Tessenderlo Kerley, Inc. Except as warranted by this label, Tessenderlo Kerley, Inc. makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose. To the extent allowed by applicable law, the exclusive remedy against Tessenderlo Kerley, Inc. for any cause of action relating to the handling or use of this product is a claim of damage, and in no event shall damages or any other recovery of any kind against Tessenderlo Kerley, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. To the extent allowed by applicable law, Tessenderlo Kerley, Inc. shall not be liable and any and all claims against Tessenderlo Kerley, Inc. are waived, for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of Tessenderlo Kerley, Inc. breach of warranty, strict liability in tort, or any other cause of action. Tessenderlo Kerley, Inc. and the seller offer this product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

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LINEBACKER™ WDG
Agricultural Fungicide

GROUP 33 FUNGICIDE

