



The Chemical Company

**ACCEPTED**  
 JUL 22 2005  
 Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 as amended, for the pesticide  
 registered under  
 EPA Reg. No. 7969-154

# Sovran®

## fungicide

**For use on apples, grapes, pears and other pome fruit, and pecans**

**Active ingredient**

Kresoxim-methyl: (methyl (E)-2-methoxyimino-2-[2-(o-tolyloxymethyl) phenyl] acetate) .....50.0%

**Inert ingredients** ..... 50.0%

**Total** .....100.0%

EPA Reg. No. 7969-154

EPA Est. No. \_\_\_\_

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

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

See the attached booklet for complete **Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.**

**Net contents:**

Product of Germany

BASF Corporation  
 Agricultural Products  
 26 Davis Drive  
 Research Triangle Park, NC 27709

<b>FIRST AID</b>	
If on skin or clothing	<ul style="list-style-type: none"> <li>•Take off contaminated clothing.</li> <li>•Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>•Call a poison control center or doctor for treatment advice.</li> </ul>
If in eyes	<ul style="list-style-type: none"> <li>•Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>•Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>•Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul style="list-style-type: none"> <li>•Call a poison control center or doctor immediately for treatment advice.</li> <li>•Have person sip a glass of water if able to swallow.</li> <li>•Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>•Do not give anything by mouth to an unconscious person.</li> </ul>
If inhaled	<ul style="list-style-type: none"> <li>•Move person to fresh air.</li> <li>•If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>•Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357)	

### **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Do not get on skin, in eyes, or on clothing. Avoid breathing vapor or spray mist.

#### **Personal Protective Equipment (PPE)**

Some materials that are chemically resistant to this product are listed below. For more options, refer to category **A** on an EPA chemical resistance category selection chart.

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Shoes plus socks

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

#### **Engineering Controls Statement**

When handlers use closed systems, 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.

### **User Safety Recommendations**

#### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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 pesticide is toxic to freshwater and estuarine fish and invertebrates. Do not apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

#### **Surface Water Advisory**

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water (via both dissolution in runoff water and adsorption to eroding soil), for several days, post-application. These include poorly draining or wet soils with readily visible slopes towards adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and highly erodible soils cultivated using poor agricultural practices such as conventional tillage and down the slope plowing, and areas where an intense or sustained rainfall is forecasted to occur within 48 hours.

#### **Ground Water Advisory**

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

### Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

#### Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of **12 hours**.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

#### Storage and Disposal

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

**Pesticide Storage:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.

**Pesticide disposal:** Wastes resulting from using this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal:** Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### In Case of Spill

In case of large-scale spillage regarding this product, call:

CHEMTREC 1-800-424-9300  
BASF Corporation 1-800-832-HELP

#### Steps to be taken in case material is released or spilled:

Wear the personal protective equipment specified on the label. Recover the material for re-use according to label whenever possible. Sweep and/or shovel up the spilled material into an appropriate closed container. Avoid the creation of dusty conditions. Remove and wash clothing and personal protective equipment prior to re-use. Keep the spill out of all sewers and open bodies of water.

### I. General Information

This package contains **Sovran® fungicide**, a 50% water-dispersible granule (WG). The active ingredient in **Sovran**, kresoxim-methyl, belongs to a new class of fungicides, the strobilurins. Strobilurins are synthetic analogs of a natural antifungal substance and belong to the group of respiration inhibitors classified by the EPA as Quinone Outside Inhibitors (QOI) or Target Site of Action Group 11 fungicides. **Sovran** is effective against pathogens resistant to other fungicides of different modes of action.

**Sovran** inhibits spore germination, sporulation, and mycelial growth on the leaf surface. Optimum disease control is achieved when **Sovran** is applied in a regularly scheduled protective spray program and is used in a rotation program with other fungicides of different modes of action.

On apples, **Sovran** controls scab, powdery mildew, frog-eye leafspot/black rot, flyspeck, sooty blotch, white rot, Brooks fruit spot and Alternaria blotch.

When **Sovran** is applied to control scab and powdery mildew, suppression of cedar apple rust and quince rust also occurs. On pears and other pome fruits, **Sovran** controls scab and powdery mildew. When **Sovran** is applied to control scab and powdery mildew, suppression of quince rust also occurs. On grapes, **Sovran** controls powdery mildew, black rot, Phomopsis cane and leaf spot, and downy mildew.

**Sovran**, applied to control these grape diseases, also suppresses Botrytis bunch rot. On pecans, **Sovran** controls leaf and nut scab. Because of its high specific activity, low vapor pressure, and good rainfastness, **Sovran** has good residual activity against target fungi.

**Sensitive Crop Precaution**  
**Sovran** may cause injury to certain sensitive cherry varieties such as Van, Sweetheart, Chelan, Somerset, Valera, Vandalay, Cavalier, Coral, Coral Champagne, Angela, Vista, Emperor Francis, Lapins, Royalton, Schmidt, Summit, Viva and Asian pears of variety Olympic (Korean Giant). Use special care when applying **Sovran** to prevent contact with these sensitive varieties and other non-target plants. Avoid off-target movement. Consult a BASF representative or local agricultural authorities for more information concerning additional cherry varieties that may be sensitive to **Sovran**.

Thoroughly rinse spray equipment, including the inside of the tank, hoses and nozzles after and before using the same equipment in crops that are sensitive to **Sovran**.

### Option A. Resistance Management

The repeated and exclusive use of **Sovran**, as with many other fungicides, may allow less sensitive strains of target fungi to build over time and may reduce disease control. To maintain the performance of **Sovran** in the field, BASF advises strict adherence to following resistance management strategies:

- Do not apply more than 3 sequential applications of **Sovran**.
- Then alternate to an effective non-strobilurin (non-QoI) fungicide with a different mode of action or different chemistry before applying **Sovran** again.

### Option B. Resistance Management

Kresoxim-methyl, the active ingredient of **Sovran**, belongs to the group of respiration inhibitors classified by the EPA as Quinone Outside Inhibitors (QoI) or Target Site of Action Group 11 fungicides. **Sovran** is effective against pathogens resistant to fungicides with modes of actions different than those of QoI fungicides, such as sterol inhibitors, dicarboximides, benzimidazoles, anilinopyrimidines, or phenylamides. The repeated and exclusive use of **Sovran** and other strobilurin (QoI) fungicides, such as azoxystrobin and trifloxystrobin, may allow less sensitive strains of target fungi to build over time and may reduce disease control. Target fungi exhibiting resistance to other strobilurin (QoI) fungicides may also exhibit resistance to **Sovran**. To maintain the performance of **Sovran** and other strobilurin (QoI) fungicides in the field, the use of this product should conform to resistance management strategies stated for each crop in **Section VI. Crop Specific Information**.

### Cleaning Spray Equipment

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Sovran**.

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## II. Application Instructions

Apply recommended rates of **Sovran** as instructed by the **VI. Crop-Specific Information**.

**Ground Application:** Apply **Sovran** in sufficient water to ensure thorough coverage of foliage, bloom, or fruit. Thorough coverage is required for optimum disease control. Do not apply when conditions favor drift from target area or when windspeed is greater than 10 mph. Equipment should be checked frequently for calibration.

Under low-level disease conditions, the minimum application rates can be used. Maximum application rates and shortened spray schedules are recommended for severe or threatening disease conditions.

**Aerial Application:** Use no less than 5 gallons of spray solution per acre. Not registered for aerial application in California.

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## III. Additives

Usually additives or adjuvants are not necessary for effective use of **Sovran**. If the pH of the tank mix is 9 or greater, BASF recommends a buffer or acidifier be added to optimize performance of **Sovran**. Refer to **Section IV. General Tank Mixing Information**. Consult a BASF representative or local authorities for more information about additives.

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## IV. General Tank Mixing Information

### Tank Mix Partners/Components

**Sovran** can be tank mixed with most recommended fungicides, insecticides, plant growth regulators, adjuvants or additives. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Sovran** with other products. Therefore, before using any tank mix (fungicides, insecticides, plant growth regulators, adjuvants, or additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

### Mixing Order

- 1) **Water.** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2) **Agitation.** Maintain constant agitation throughout mixing and application.
- 3) **Inductor.** If an inductor is used, rinse it thoroughly after each component has been added.
- 4) **Products in PVA bags.** Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 5) **Water-dispersible products** (such as **Sovran**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
- 6) **Water-soluble products.**
- 7) **Emulsifiable concentrates** (such as oil concentrate when applicable).
- 8) **Water-soluble additives** (such as AMS or UAN when applicable).
- 9) **Remaining quantity of water.**

Maintain constant agitation during application.

**Option A. V. Restrictions and Limitations**

- **Maximum seasonal use rate:** Do not apply more than a **total of 1.6 pounds** (25.6 ounces) of **Sovran® fungicide** per acre, per season.
- Do not make more than a total of 6 applications of **Sovran** per season, not exceeding the maximum seasonal use rate.
- **Preharvest Interval (PHI):** See **Table 1. Crop-Specific Restrictions and Limitations** for each crop's pre-harvest interval.
- **Restricted Entry Interval (REI): 12 hours.**
- Do not reduce the **Sovran** rates recommended on the label.
- Do not apply through any type of irrigation system.

**Option B. V. Restrictions and Limitations**

- **Maximum seasonal use rate:** Do not apply more than a **total of 1.6 pounds** (25.6 ounces) of **Sovran® fungicide** per acre, per season.
- **Preharvest Interval (PHI):** See **Table 1. Crop-Specific Restrictions and Limitations** for each crop's pre-harvest interval.
- **Restricted Entry Interval (REI): 12 hours.**
- Do not reduce the **Sovran** rates recommended on the label.
- Do not apply through any type of irrigation system.

<b>Crop</b>	<b>Minimum Time from Application to Harvest (PHI)</b>	<b>Maximum Rate Per Acre Per Application</b>	<b>Maximum Rate Per Acre Per Season</b>
Pome fruit: Apple, Pear, Quince, Crabapple, Loquat, Mayhaw, Oriental Pear	30 days	6.4 ounces	25.6 ounces
Grape	14 days	6.4 ounces	25.6 ounces
Pecan	45 days	4.8 ounces	25.6 ounces

**Option A. VI. Crop-Specific Information**

**Option A. Apple**

**Application Information**

Make applications of **Sovran® fungicide** in sufficient spray volume to ensure thorough coverage. The rate of **Sovran** is dependent on numerous factors, including varietal susceptibility, weather conditions and disease pressure. Refer to **Table 2** for specific recommendations for disease control, application timings, and rates. Optimum disease control is achieved when **Sovran** is applied in a regularly scheduled protective spray program with other fungicides of different modes of action. When **Sovran** is applied curatively against scab, applications of **Sovran** should be made as soon as possible following the beginning of a scab infection period, but within 96 hrs, and at the highest label rate. Subsequent applications should be made within 7- to 10-days as described in **Table 2**. A reliable disease forecasting system must be used to accurately predict and record scab infection periods.

**Sovran** applied for the control of scab and powdery mildew will also suppress cedar-apple rust and quince rust. Under conditions of high disease pressure, rotation of **Sovran** with other fungicides effective against rust is recommended. During periods of heavy infection pressure, use the higher rates of **Sovran** shown in **Table 2**.

**Option A. Pear, Quince, Crabapple, Loquat, Mayhaw, Oriental Pear**

**Application Information**

Make applications of **Sovran** in sufficient spray volume to ensure thorough coverage. Apply **Sovran** at the rates and intervals described in **Table 3**. For concentrate sprays, use the equivalent rate per acre determined for dilute spray. **Sovran** applied for the control of scab and powdery mildew will also suppress quince rust. Under conditions of high disease pressure, rotation of **Sovran** with other fungicides effective against rust is recommended. Use the higher rate of **Sovran** when heavy infection pressure exists or is anticipated.

Refer to section I. **General Information** for **Resistance Management** guidelines.

**Option A. Table 2. Sovran Application Rates and Timing on Apple.**

Disease	Directions for Use	Sovran Application Rates per Acre <sup>1</sup>
Scab	Begin at 1/2 - inch green or when conditions are conducive for disease development; repeat at 7- to 10-day intervals depending on the <b>Sovran</b> rate, rate of shoot growth, level of disease pressure and the curative properties of the fungicide applied after <b>Sovran</b> . A 7-day interval is recommended if <b>Sovran</b> is applied at 3.2 oz/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Sovran</b> .	3.2 to 6.4 ounces
Powdery mildew Frogeye Leaf Spot	Begin at 1/2 -inch green and repeat at 7- to 10-day intervals depending on the rate of shoot growth and level of disease pressure. A 7-day interval is recommended if shoots are growing rapidly or disease pressure is high.	4.0 to 6.4 ounces
Alternaria blotch Brooks fruit spot Flyspeck Sooty blotch White rot (Bot rot) Black rot	Apply <b>Sovran</b> at first or second cover and repeat at 7 to 14 day intervals.	4.0 to 6.4 ounces
Cedar-apple rust Quince rust (suppression)	Applications of <b>Sovran</b> for control of scab or powdery mildew will also suppress cedar-apple and quince rust.	3.2 to 6.4 ounces

<sup>1</sup> The rates per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre. Do not use more than 6.4 ounces per acre per application. At 3.2 to 4.0 ounces per acre, a maximum of 6 treatments per season can be applied. At 6.4 ounces per acre, a maximum of 4 treatments can be applied.

**Option A. Table 3. Sovran Application Rates and Timing on Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear.**

Disease	Directions for use	Sovran Application Rates per Acre <sup>1</sup>
Scab	<p>Begin at 1/2 - inch green or when conditions are conducive for disease development; repeat at 7- to 10-day intervals depending on the <b>Sovran</b> rate, rate of shoot growth, level of disease pressure and the curative properties of the fungicide applied after <b>Sovran</b>.</p> <p>A 7-day interval is recommended if <b>Sovran</b> is applied at 3.2 oz/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Sovran</b>.</p>	3.2 to 6.4 ounces
Powdery mildew	<p>Begin at 1/2 -inch green and repeat at 7- to 10-day intervals depending on the rate of shoot growth and level of disease pressure.</p> <p>A 7-day interval is recommended if shoots are growing rapidly or disease pressure is high.</p>	4.0 to 6.4 ounces
Quince rust (suppression)	Applications of Sovran for the control of scab or powdery mildew will also suppress quince rust.	3.2 to 6.4 ounces

<sup>1</sup> The rates per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre. Do not use more than 6.4 ounces per acre per application. At 3.2 to 4.0 ounces per acre, a maximum of 6 treatments per season can be applied. At 6.4 ounces per acre, a maximum of 4 treatments per season can be applied.

**Option A. Grape**

**Application Information**

Use **Sovran® fungicide** as a protective spray as described in **Table 4**.  
 Make applications of **Sovran** in sufficient spray volume to ensure thorough coverage. Do not use less than 10 gallons of water per acre.  
 The use of organosilicone-based adjuvants in a tank mix with **Sovran** may result in marginal burn of the youngest leaves of certain sensitive varieties.  
 For grape varieties more susceptible to powdery mildew or under conditions that favor rapid powdery mildew development, use the higher rate of **Sovran** per acre.

When powdery mildew pressure is low, the spray interval can be extended up to 21 days. BASF recommends that a reliable risk assessment model (such as the Gubler-Thomas model) be used to assist in determining the spray interval. Consult your local agriculture extension agent or BASF representative for more information.

For downy mildew control, begin sprays at bud break and continue on a 7- to 10-day schedule. Under conditions that favor severe downy mildew development, use 6.4 ounces of **Sovran** per acre.

**Sovran** applied for control of the previously mentioned grape diseases between early bloom and veraison will also provide suppression of Botrytis bunch rot. Under conditions of high disease pressure, effective Botryticides are recommended for control of Botrytis bunch rot.

Refer to section I. **General Information** for **Resistance Management** guidelines.

**Option A. Pecan**

**Application Information**

The best scab control will be achieved by using **Sovran** on a protective spray schedule. Depending on spray timing and infection pressure apply 2.4-4.8 ounces of **Sovran** as described in **Table 5**. To ensure good coverage, BASF recommends using a minimum of 50 gallons of water per acre.  
 Refer to section I. **General Information** for **Resistance Management** guidelines.

**Option A. Table 4. Sovran® fungicide Application Rates and Timing on Grape.**

Disease	Use Directions	Sovran Application Rates Per Acre
Powdery mildew	Begin at bud break and continue applications on a 14-day interval; under low disease pressure, the interval may be extended up to 21 days.	3.2 to 4.8 ounces
Grape black rot Phomopsis	Begin at bud break and continue on a 14-day interval.	3.2 to 4.8 ounces
Downy mildew	Begin at bud break and continue on a 7- to 10-day interval.	4.0 to 6.4 ounces
Botrytis bunch rot (suppression)	Applications of <b>Sovran</b> , made between early bloom and veraison for the control of powdery mildew, downy mildew, black rot or Phomopsis, will also suppress Botrytis bunch rot.	3.2 to 6.4 ounces



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Option A. Table 5. Sovran Application Rates and Timing on Pecan.		
Disease	Use Directions	Sovran Application Rates Per Acre
Scab	<b>Prepollination:</b> Begin at bud break and continue on a 14-day interval through the end of pollination.	2.4 to 3.2 ounces
Scab	<b>Postpollination:</b> Apply on a 21-day interval until shell hardening.	3.2 to 4.8 ounces

**Option B. VI. Crop-Specific Information**

**Option B. Apple**

**Application Information**

Make applications of **Sovran® fungicide** in sufficient spray volume to ensure thorough coverage. The rate of **Sovran** is dependent on numerous factors, including varietal susceptibility, weather conditions and disease pressure. Refer to **Table 2** for specific recommendations for disease control, application timings, and rates. Optimum disease control is achieved when **Sovran** is applied in a regularly scheduled protective spray program with other fungicides of different modes of action. When **Sovran** is applied curatively against scab, applications of **Sovran** should be made as soon as possible following the beginning of a scab infection period, but within 96 hrs, and at the highest label rate. Subsequent applications should be made within 7- to 10-days as described in **Table 2**. A reliable disease forecasting system must be used to accurately predict and record scab infection periods.

**Sovran** applied for the control of scab and powdery mildew will also suppress cedar-apple rust and quince rust. Under conditions of high disease pressure, rotation of **Sovran** with other fungicides effective against rust is recommended. During periods of heavy infection pressure, use the higher rates of **Sovran** shown in **Table 2**.

**Crop-Specific Restrictions and Limitations**

To limit the potential for development of resistance:

- Do not make more than four (4) applications of **Sovran** or other strobilurin (QoI) fungicides per season.
- Do not make more than two (2) sequential applications of **Sovran**.
- Apply **Sovran** in alternation with labeled non-strobilurin (non-QoI) fungicides with a different mode of action.

**Option B. Pear, Quince, Crabapple, Loquat, Mayhaw, Oriental Pear**

**Application Information**

Make applications of **Sovran** in sufficient spray volume to ensure thorough coverage. Apply **Sovran** at the rates and intervals described in **Table 3**. For concentrate sprays, use the equivalent rate per acre determined for dilute spray. **Sovran** applied for the control of scab and powdery mildew will also suppress quince rust. Under conditions of high disease pressure, rotation of **Sovran** with other fungicides effective against rust is recommended. Use the higher rate of **Sovran** when heavy infection pressure exists or is anticipated.

**Option B. Table 2. Sovran Application Rates and Timing on Apple.**

Disease	Directions for Use	Sovran Application Rates per Acre <sup>1</sup>
Scab	Begin at 1/2 - inch green or when conditions are conducive for disease development; repeat at 7- to 10-day intervals depending on the <b>Sovran</b> rate, rate of shoot growth, level of disease pressure and the curative properties of the fungicide applied after <b>Sovran</b> . A 7-day interval is recommended if <b>Sovran</b> is applied at 3.2 oz/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Sovran</b> .	3.2 to 6.4 ounces
Powdery mildew Frogeye Leaf Spot	Begin at 1/2 -inch green and repeat at 7- to 10-day intervals depending on the rate of shoot growth and level of disease pressure. A 7-day interval is recommended if shoots are growing rapidly or disease pressure is high.	4.0 to 6.4 ounces
Alternaria blotch Brooks fruit spot Flyspeck Sooty blotch White rot (Bot rot) Black rot	Apply <b>Sovran</b> at first or second cover and repeat at 7 to 14 day intervals.	4.0 to 6.4 ounces
Cedar-apple rust Quince rust (suppression)	Applications of <b>Sovran</b> for the control of scab or powdery mildew will also suppress cedar apple and quince rust.	3.2 to 6.4 ounces

<sup>1</sup> The rate per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre.

**Option B. Table 3. Sovran Application Rates and Timing on Pear, Quince, Crabapple, Loquat, Mayhaw, and Oriental Pear.**

Disease	Directions for use	Sovran Application Rates per Acre <sup>1</sup>
Scab	<p>Begin at 1/2 - inch green or when conditions are conducive for disease development; repeat at 7- to 10-day intervals depending on the <b>Sovran</b> rate, rate of shoot growth, level of disease pressure and the curative properties of the fungicide applied after <b>Sovran</b>.</p> <p>A 7-day interval is recommended if <b>Sovran</b> is applied at 3.2 oz/A, shoots are growing rapidly, disease pressure is high, or a fungicide with protectant activity only is applied following <b>Sovran</b>.</p>	3.2 to 6.4 ounces
Powdery mildew	<p>Begin at 1/2 -inch green and repeat at 7- to 10-day intervals depending on the rate of shoot growth and level of disease pressure.</p> <p>A 7-day interval is recommended if shoots are growing rapidly or disease pressure is high.</p>	4.0 to 6.4 ounces
Quince rust (suppression)	Applications of Sovran for the control of scab or powdery mildew will also suppress quince rust.	3.2 to 6.4 ounces
<p><sup>1</sup> The rates per acre are based on a tree size requiring a standard dilute spray of 300 gallons per acre.</p>		

**Crop-Specific Restrictions and Limitations**

To limit the potential for development or resistance:

- Do not make more than four (4) applications of **Sovran** or other strobilurin (QoI) fungicides per season.
- Do not make more than two (2) sequential applications of **Sovran**.
- Apply **Sovran** in alternation with labeled non-strobilurin (non-QoI) fungicides with a different mode of action.

**Option B. Grape****Application Information**

Use **Sovran® fungicide** as a protective spray as described in **Table 4**.

Make applications of **Sovran** in sufficient spray volume to ensure thorough coverage. Do not use less than 10 gallons of water per acre.

The use of organosilicone-based adjuvants in a tank mix with **Sovran** may result in marginal burn of the youngest leaves of certain sensitive varieties.

For grape varieties more susceptible to powdery mildew or under conditions that favor rapid powdery mildew development, use the higher rate of **Sovran** per acre.

When powdery mildew pressure is low, the spray interval can be extended up to 21 days. BASF recommends that a reliable risk assessment model (such as the Gubler-Thomas model) be used to assist in determining the spray interval. Consult your local agriculture extension agent or BASF representative for more information.

For downy mildew control, begin sprays at bud break and continue on a 7- to 10-day schedule. Under conditions that favor severe downy mildew development, use 6.4 ounces of **Sovran** per acre.

**Sovran** applied for control of the previously mentioned grape diseases between early bloom and veraison will also provide suppression of Botrytis bunch rot. Under conditions of high disease pressure, effective Botryticides are recommended for control of Botrytis bunch rot.

**Crop-Specific Restrictions and Limitations**

To limit the potential for development of resistance:

- On wine and table grapes, do not make more than four (4) applications of **Sovran** or other strobilurin (QoI) fungicides per season. On grapes for other uses, do not make more than three (3) applications per season.
- Do not make more than two (2) sequential applications of **Sovran**.
- Apply **Sovran** in alternation with labeled non-strobilurin (non-QoI) fungicides with different modes of action.

**Option B. Pecan****Application Information**

The best scab control will be achieved by using **Sovran** on a protective spray schedule. Depending on spray timing and infection pressure apply 2.4-4.8 ounces of **Sovran** as described in **Table 5**. To ensure good coverage, BASF recommends using a minimum of 50 gallons of water per acre.

**Crop-Specific Restrictions and Limitations**

To limit the potential for development or resistance:

- Do not make more than three (3) applications of **Sovran** or other strobilurin (QoI) fungicides per season.
- Do not make more than three (3) sequential applications of **Sovran**.
- Apply **Sovran** in alternation with labeled non-strobilurin (non-QoI) fungicides with different modes of action.

Option B Table 4. Sovran® fungicide Application Rates and Timing on Grape.		
Disease	Use Directions	Sovran Application Rates Per Acre
Powdery mildew	Begin at bud break and continue applications on a 14-day interval; under low disease pressure, the interval may be extended up to 21 days.	3.2 to 4.8 ounces
Grape black rot Phomopsis	Begin at bud break and continue on a 14-day interval.	3.2 to 4.8 ounces
Downy mildew	Begin at bud break and continue on a 7- to 10-day interval.	4.0 to 6.4 ounces
Botrytis bunch rot (suppression)	Applications of <b>Sovran</b> , made between early bloom and veraison for the control of powdery mildew, downy mildew, black rot or Phomopsis, will also suppress Botrytis bunch rot.	3.2 to 6.4 ounces

Option B. Table 5. Sovran Application Rates and Timing on Pecan.		
Disease	Use Directions	Sovran Application Rates Per Acre
Scab	<b>Prepollination:</b> Begin at bud break and continue on a 14-day interval through the end of pollination.	2.4 to 3.2 ounces
Scab	<b>Postpollination:</b> Apply on a 21-day interval until shell hardening.	3.2 to 4.8 ounces

**Crops**  
 This product can be used on the following crops:

**Apple**  
**Crabapple**  
**Grape**  
**Loquat**  
**Mayhaw/Hawthorn**  
**Oriental Pear**  
**Pear**  
**Pecan**  
**Quince**

**Conditions of Sale and 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 should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer. BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL BASF OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

**Diseases listed in this label:**

Common Name	Scientific Name
Alternaria blotch	<i>Alternaria mali</i>
Apple powdery mildew	<i>Podosphaera leucotricha</i>
Apple scab	<i>Venturia inaequalis</i>
Black rot	<i>Botryosphaeria obtusa</i>
Botrytis bunch rot	<i>Botrytis cinerea</i>
Brooks fruit spot	<i>Mycosphaerella pomi</i>
Cedar apple rust	<i>Gymnosporangium juniperi-virginianae</i>
Crabapple scab	<i>Venturia inaequalis</i>
Flyspeck	<i>Zygophiala jamaicensis</i>
Frogeye leafspot	<i>Botryosphaeria obtusa</i>
Grape black rot	<i>Guignardia bidwellii</i>
Grape downy mildew	<i>Plasmopara viticola</i>
Grape powdery mildew	<i>Uncinula necator</i>
Loquat scab	<i>Venturia inaequalis</i>
Mayhaw/hawthorn scab	<i>Venturia inaequalis</i>
Oriental pear scab	<i>Venturia pyrina</i>
Pear scab	<i>Venturia pyrina</i>
Pecan scab	<i>Cladosporium caryigenum</i>
Phomopsis cane and leaf spot	<i>Phomopsis viticola</i>
Pome fruit powdery mildew	<i>Podosphaera spp.</i>
Quince rust	<i>Gymnosporangium clavipes</i>
Quince scab	<i>Venturia pyrina</i>
Sooty blotch	<i>Gloeodes pomigena</i>
White rot (Bot rot)	<i>Botryosphaeria dothidea</i>

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