7969-154 4/12/2001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

APR 12 2001

Ms. Karen Blundell
BASF Corporation
P.O. Box 13528
Research Triangle Park, NC 27709-3528

Subject: Sovran Fungicide
EPA Reg. No. 7969-154
Your January 8, 2001 submission of notification

Dear Ms. Blundell,

The application above submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has been reviewed as an amendment rather than a notification per our January 25, 2001 letter to you from Linda Arrington. The revised language and the label amendment are acceptable providing you make the following additional revisions.

1. In the precautionary statements section under "Personal Protective Equipment", revise the statements to read "Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for 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 and shoes plus socks."

2. In the "Agricultural Use Requirements" box, replace waterproof gloves with "Chemical-resistant gloves made of any waterproof material".

A stamped copy of the accepted with comment label is enclosed for your records. You must submit a copy of the final printed label prior to releasing any product bearing this label into

CONCURRENCES								
SYMBOL	7505C							
SURNAME	Ellenberger							
DATE	4/12/01							

channels of trade. If there are questions concerning this matter, contact Dr. Tom Ellwanger at (703) 308-9352.

Sincerely,

Mary L. Waller

Mary L. Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

BASF

wjm 1-5-01 NVA 2000-04-079-0040 Options A & B

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ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 12 2001

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
P.O. Box 13528, Research Triangle Park, NC 27709

FIRST AID	
If on skin or clothing	•Take off contaminated clothing. •Rinse skin immediately with plenty of water for 15-20 minutes. •Call a poison control center or doctor for treatment advice.
If in eyes	•Hold eye open and rinse slowly and gently with water for 15-20 minutes. •Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. •Call a poison control center or doctor for treatment advice.
If swallowed	•Call a poison control center or doctor immediately for treatment advice. •Have person sip a glass of water if able to swallow. •Do not induce vomiting unless told to do so by a poison control center or doctor. •Do not give anything by mouth to an unconscious person.
If inhaled	•Move person to fresh air. •If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. •Call a poison control center or doctor for further treatment advice.
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 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)

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.

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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:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Storage and Disposal

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

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	800-424-9300
BASF Corporation	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** belongs to a new class of fungicides, the strobilurins. Strobilurins are synthetic analogs of a natural antifungal substance. **Sovran** has a new mode of action and is effective against pathogens resistant to other fungicides.

Sovran has a protective effect because it inhibits spore germination and a curative effect because it inhibits mycelial growth and sporulation of the fungus on the leaf surface. **Sovran** can therefore be applied in either pre- or postinfection situations. However, 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.

On apples, **Sovran** controls scab, powdery mildew, frogeye 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 gray mold. 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 Champagne, Angela, Vista, Emperor Francis, 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 the following resistance management strategies:

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

Option B. Resistance Management

Sovran has a new mode of action and is effective against pathogens resistant to other fungicides, including those resistant to sterol inhibitors, dicarboximides, benzimidazoles, anilinopyrimidines or phenylamides. The repeated and exclusive use of

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Sovran® fungicide, as with many other fungicides, may allow less sensitive strains of target fungi to build over time and may reduce disease control. The active ingredient in **Sovran**, kresoxim-methyl, does exhibit cross resistance to other strobilurin fungicides, such as azoxystrobin and trifloxystrobin. To maintain the performance of **Sovran** and other strobilurin 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**.

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, and 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. Do not use aerial application in California.

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.

IV. General Tank Mixing Information

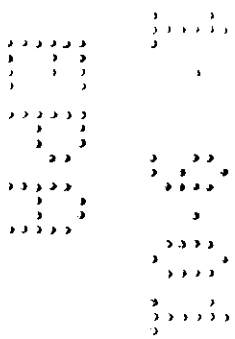
Tank Mix Partners/Components

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.



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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.**
- Allow a minimum of **7 days** between **sequential applications** of **Sovran.**
- 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.**
- Allow a minimum of **7 days** between **sequential applications** of **Sovran.**
- Do not reduce the **Sovran** rates recommended on the label.
- Do not apply through any type of irrigation system.

Table 1. Crop-Specific Restrictions and Limitations

Crop	Minimum Time from Application to Harvest (PHI)	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season
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

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Option A. VI. Crop-Specific Information

Apple

Application Information

Make dilute 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, rates per acre or rates per 100 gallons based on tree row volume (TRV). For concentrate sprays use the equivalent rate per acre determined for dilute spray.

For scab control, apply **Sovran** as a protectant at 1/2-inch green or when environmental conditions become favorable for primary scab and continue on a 10-14 day interval. During periods of rapid shoot growth, use a 10 day interval. For curative scab applications, up to a maximum of 96 hours after the beginning of the scab infection period, use the high rate of **Sovran** and a 10 day interval as described in **Table 2.**

For powdery mildew and frogeye leafspot/black rot control, begin applying at 1/2-inch green and continue preventative applications on a 10-14 day interval. **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. To control flyspeck, sooty blotch, white rot (bot rot), Brooks fruit spot and Alternaria blotch, apply **Sovran** at first or second cover and continue on a 10-14 day interval. During periods of heavy infection pressure, use the higher rates of **Sovran** shown in **Table 2**, making sure not to exceed the maximum seasonal use rate. Refer to the section **I. General Information** for **Resistance Management** guidelines.

Pear, Quince, Crabapple, Loquat, Mayhaw, Oriental Pear

Application Information

Make dilute 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. Use **Sovran** as a protectant against scab and powdery mildew, beginning applications at 1/2 inch green or when environmental conditions are favorable for disease development. Continue spraying on a 10-14 day interval. Use the higher rate of **Sovran** when heavy infection pressure exists or is anticipated.

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.

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

Table 2. Sovran Application Rates and Timing on Apple

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water dilute based on tree row volume[1]	Rate per acre[2]
Scab	Begin at 1/2-inch green or when conditions are conducive for disease development; repeat at 10-14 day intervals.	1.0-1.6 ounces	4.0-6.4 ounces
Powdery mildew Frogeye leafspot/ black rot	Begin at 1/2-inch green and repeat at 10-14 day intervals.		
Alternaria blotch Brooks fruit spot Flyspeck Sooty blotch White rot (Bot rot)	Apply **Sovran** at first or second cover and repeat at 10-14 day intervals.		
Cedar-apple rust and quince rust (suppression)	Applications of **Sovran** for the control of scab or powdery mildew will also suppress cedar-apple and quince rust.		

[1] Do not apply less than 2 ounces of **Sovran** per acre when using rates based on tree row volume.

[2] The rates per acre are based on a tree size requiring a standard dilute spray of 400 gallons per acre. Do not use more than 6.4 ounces per acre per application. At 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.

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

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water dilute based on tree row volume[1]	Rate per acre[2]
Scab Powdery mildew	Begin at 1/2-inch green and repeat at 10-14 day intervals.	1.0-1.6 ounces	4.0-6.4 ounces
Quince rust (suppression)	Applications of **Sovran** for the control of scab or powdery mildew will also suppress quince rust.		

[1] Do not apply less than 2 ounces of **Sovran** per acre when using rates based on tree row volume.

[2] The rates per acre are based on a tree size requiring a standard dilute spray of 400 gallons per acre. Do not use more than 6.4 ounces per acre per application. At 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.

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Grape

Application Information

Use **Sovran® fungicide** as a protective spray at 3.2-6.4 ounces per acre as described in **Table 4.**
Make applications of **Sovran® fungicide** 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.
Black rot and *Phomopsis* cane and leaf spot control should begin at bud break and continue on a 14-day schedule through 1/4-inch berry. Use 4.8 ounces of **Sovran** per acre during periods of heavy infection pressure.
For powdery mildew control, begin sprays at bud break and continue on a 14-day schedule. For more susceptible grape varieties or under conditions that favor rapid powdery mildew development, use 4.8 ounces of **Sovran** per acre. When disease 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 7-10 day schedule. Under conditions that favor severe downy mildew development, use 6.4 ounces of **Sovran** per acre making sure not to exceed the maximum seasonal use rate.

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

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

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 the section **I. General Information** for **Resistance Management** guidelines.

Table 4. Sovran Application Rates and Timing on Grape

Disease	Application Interval	Sovran Rates Per Acre[1]
Powdery mildew	Begin at bud break and continue on a 14 day interval; under low disease pressure, the interval may be extended up to 21 days.	3.2 - 4.8 ounces
Grape black rot Phomopsis	Begin at bud break and continue on a 14 day interval.	3.2 - 4.8 ounces
Downy mildew	Begin at bud break and continue on a 7-10 day interval.	4.0 - 6.4 ounces
Botrytis gray mold (suppression)	Applications of **Sovran** made between early bloom and veraison for the control of powdery or downy mildew, black rot or Phomopsis, will suppress Botrytis gray mold	3.2 - 6.4 ounces

[1] At 4.8 ounces per acre, a maximum of 5 treatments per season can be applied. At 6.4 ounces per acre, a maximum of 4 treatments per season can be applied.

Table 5. Sovran Application Rates and Timing on Pecan

Disease	Timing and Application Interval	Sovran Rates Per Acre
Scab	**Prepollination:** Begin at bud break and continue on a 14 day interval through the end of pollination.	2.4 - 3.2 ounces
Scab	**Postpollination:** Apply on a 21 day interval until shell hardening.	3.2 - 4.8 ounces

Option B. VI. Crop-Specific Information

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Apple

Application Information

Make dilute 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, rates per acre or rates per 100 gallons based on tree row volume (TRV). For concentrate sprays use the equivalent rate per acre determined for dilute spray.

For scab control, apply **Sovran** as a protectant at 1/2-inch green or when environmental conditions become favorable for primary scab and continue on a 10-14 day interval. During periods of rapid shoot growth, use a 10 day interval. **Sovran** will provide post-infection control of apple scab, up to a maximum of 96 hours after the beginning of the scab infection period. When **Sovran** is applied curatively, applications of **Sovran** should be made as soon as possible following a scab infection period at the high rate and a 10 day interval as described in **Table 2**. A reliable disease forecasting system must be used to accurately predict and record scab infection periods.

For powdery mildew and frogeye leafspot/black rot control, begin applying at 1/2-inch green and continue preventative applications on a 10-14 day interval. **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. To control flyspeck, sooty blotch, white rot (bot rot), Brooks fruit spot and Alternaria blotch, apply **Sovran** at first or second cover and continue on a 10-14 day interval. 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 fungicides per season.
- Do not make more than three (3) sequential applications of **Sovran.**
- Apply **Sovran** in alternation with labeled non-strobilurin fungicides with a different mode of action. After making two (2) or three (3) sequential **Sovran** applications, switch to a labeled non-strobilurin fungicide for at least two applications before applying Sovran again.

Pear, Quince, Crabapple, Loquat, Mayhaw, Oriental Pear

Application Information

Make dilute 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. Use **Sovran** as a protectant against scab and powdery mildew, beginning applications at 1/2 inch green or when environmental conditions are favorable for disease development. **Sovran** applied for the control of scab and powdery mildew will also suppress quince rust. Under conditions of high disease pressure, rotation of

Table 2. Sovran Application Rates and Timing on Apple

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water dilute based on tree row volume[1]	Rate per acre[2]
Scab	Begin at 1/2-inch green or when conditions are conducive for disease development; repeat at 10-14 day intervals.	1.0 - 1.6 ounces	4.0 - 6.4 ounces
Powdery mildew Frogeye leafspot/ black rot	Begin at 1/2-inch green and repeat at 10-14 day intervals.		
Alternaria blotch Brooks fruit spot Flyspeck Sooty blotch White rot (Bot rot)	Apply **Sovran** at first or second cover and repeat at 10-14 day intervals.		
Cedar-apple rust and quince rust (suppression)	Applications of **Sovran** for the control of scab or powdery mildew will also suppress cedar-apple and quince rust.		

[1] Do not apply less than 2 ounces of **Sovran** per acre when using rates based on tree row volume.
[2] The rates per acre are based on a tree size requiring a standard dilute spray of 400 gallons per acre.

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

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water dilute based on tree row volume[1]	Rate per acre[2]
Scab Powdery mildew	Begin at 1/2-inch green and repeat at 10-14 day intervals.	1.0 - 1.6 ounces	4.0 - 6.4 ounces
Quince rust (suppression)	Applications of **Sovran** for the control of scab or powdery mildew will also suppress cedar-apple and quince rust.	1.0 - 1.6 ounces	4.0 - 6.4 ounces

[1] Do not apply less than 2 ounces of **Sovran** per acre when using rates based on tree row volume.
[2] The rates per acre are based on a tree size requiring a standard dilute spray of 400 gallons per acre.

Sovran® fungicide with other fungicides effective against rust is recommended. Continue spraying on a 10-14 day interval. Use the higher rate of **Sovran** when heavy infection pressure exists or is anticipated.

Crop-Specific Restrictions and Limitations
To limit the potential for development of resistance:
- Do not make more that four (4) applications of **Sovran** or other strobilurin fungicides per season.
- Do not make more than three (3) sequential applications of **Sovran.**
- Apply **Sovran** in alternation with labeled non-strobilurin fungicides with a different mode of action.

After making two (2) or three (3) sequential **Sovran** applications, switch to a labeled non-strobilurin fungicide for at least two applications before applying Sovran again.

Grapes

Application Information

Use **Sovran® fungicide** as a protective spray at 3.2-6.4 ounces per acre as described in **Table 4.**
Make applications of **Sovran® fungicide** 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.
Black rot and *Phomopsis* cane and leaf spot control should begin at bud break and continue on a 14-day schedule through 1/4-inch berry. Use 4.8 ounces of **Sovran** per acre during periods of heavy infection pressure.
For powdery mildew control, begin sprays at bud break and continue on a 14-day schedule. For more susceptible grape varieties or under conditions that favor rapid powdery mildew development, use 4.8 ounces of **Sovran** per acre. When disease 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 7-10 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 gray mold. Under conditions of high disease pressure, effective Botryticides are recommended for control of gray mold.

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 fungicides per season. On grapes for other uses, do not make more than three (3) applications per season.
- Do not make more than three (3) sequential applications of **Sovran.**
- Apply **Sovran** in alternation with labeled non-strobilurin fungicides with a different mode of action.

Pecans

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

Table 4. Sovran Application Rates and Timing on Grape

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

Table 5. Sovran Application Rates and Timing on Pecan

Disease	Timing and Application Interval	Sovran Rates Per Acre
Scab	**Prepollination:** Begin at bud break and continue on a 14 day interval through the end of pollination.	2.4 - 3.2 ounces
Scab	**Postpollination:** Apply on a 21 day interval until shell hardening.	3.2 - 4.8 ounces

Crops

This product can be used on the following crops:

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

Look inside for complete **Restrictions and Limitations** and **Application Instructions.**

Diseases listed in this label:

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

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.

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