



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg.
Number:

7969-154

Date of Issuance:

MAY 28 1999

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional Reg.
Expires 10/15/03

Name of Pesticide Product:

Sovran Fungicide

Name and Address of Registrant (include ZIP Code):

BASF Corporation
26 Davis Drive
P.O. Box 13528
Research Triangle Park, NC 27709-3528

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(B) provided that you:

1. Make the following label changes:
 - a. Revise the EPA Registration Number to read "EPA REG. NO. 7969-154".
 - b. Add the following statement to the beginning of the "Environmental Hazards" section: "This pesticide is toxic to freshwater and estuarine fish and invertebrates".
 - c. Add the following paragraphs to appear under the "Environmental Hazards" section:

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,

Continued on page 2

Signature of Approving Official:

Mary J. Waller
Mary Waller, Product Manager 21
Fungicide Branch, Registration Division

Date:

5/28/99

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."

2. Submit by October 15, 2002 the following studies conducted in accordance with the Good Laboratory Practice Standards, 40 CFR Part 160, and appropriate test guidelines as referenced in EPA's Data Requirements for Registration Regulations, 40 CFR Part 158:

* Four additional field trial studies on grapes from Region 10

3. Submit by May 28, 2004, residue data demonstrating that the levels in food are not above the levels anticipated. Following the initial data submission, EPA is authorized to require similar data on a time frame it deems appropriate.

4. Submit production information (pounds or gallons produced) for this product for the fiscal year in which the use is conditionally registered, in accordance with FIFRA Section 29. The product information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year. This information is submitted to:

Registration Support Branch
Registration Division (7505C)
401 M Street, S.W.
Washington, D.C. 20460

5. Submit one (1) copy of the final printed labeling before you release the product for shipment.

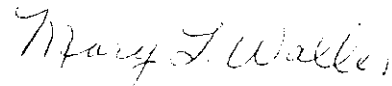
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EPA Reg. No. 7969-154

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



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

Enclosure

Best Available Copy

Submitted to EPA 2/4/99.

Sovran®

fungicide

For use on apples, grapes, pears and other pome fruits, and pecans

Active ingredient	
Kresoxim-methyl (methyl (E)-2-methoxyimino-2-[2-(o-toloxymethyl)phenyl] acetate)	50.0%
Inert ingredients	50.0%
Total	100.0%

EPA Reg. No. 7969-

EPA Est. No. 7969- ___

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.

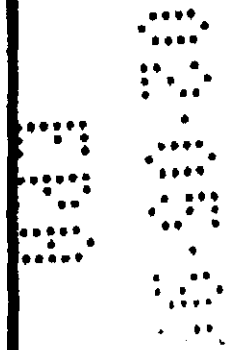
Net contents:

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

5/28/99

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

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



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.

Statement of Practical Treatment
If on skin: Wash with plenty of soap and water. Get medical attention.
If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.
If in eyes: Flush with plenty of water. Call a physician if irritation persists.
If swallowed: Call a physician or Poison Control Center. Immediately drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

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
 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.

II. 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.

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

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

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment.
- Your local poison control center (hospital).
- BASF Corporation (800-832-HELP)

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

- Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with water.
- Wash clothing before re-use.
- Keep spill out of all sewers and open bodies of water.

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-eradivative 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, cedar apple rust, frog-eye leafspot/black rot, tyespeck, sooty blotch, white rot and Brooks fruit spot. On pears and other pome fruits, Sovran controls scab and powdery mildew diseases. On grapes, Sovran controls powdery mildew, black rot, Phomopsis cane and leaf spot, and downy mildew. 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.

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:

- BASF recommends making no more than 3 sequential applications of Sovran. Then alternate to an effective nonstrobilurin fungicide with a different mode of action for at least 2 applications. Thereafter, Sovran can be sprayed again for a maximum of 3 additional consecutive applications.
 - Do not make more than a total of 6 applications of Sovran per season.
 - Do not apply Sovran as the final spray of the season.
- Carefully read and understand the entire label before using Sovran.

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.

Apply recommended rates of Sovran as instructed by the Crop-Specific Information. Apply Sovran with ground spray equipment. Equipment should be checked frequently for calibrations.

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

Do not apply when conditions favor drift from target area or when windspeed is greater than 10 mph.

Coverage

Apply Sovran in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control.

V. Additives

No additives or adjuvants are necessary for effective use of Sovran. Consult a BASF representative or to agricultural authorities for more information concerning additives.

VI. Mixing Order

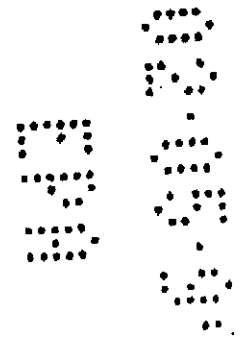
Begin by agitating a thoroughly clean sprayertank full of clean water and add the recommended product amounts in the following order:

- 1) Sovran
- 2) Tank mix partner, if applicable
- 3) Remaining quantity water

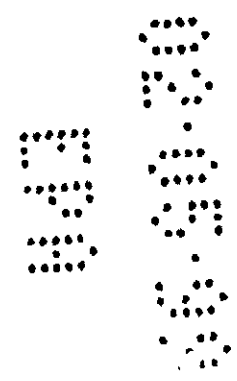
Maintain constant agitation during application. Make sure that each component is thoroughly mixed and suspended before adding additional tank mix partner. See section IX, Crop-Specific information for more details.

VII. General Tank Mixing Information

Sovran can be tank mixed with most recommended fungicides and insecticides. 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. Therefore, before using any tank mix, 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 applications.



- **Maximum seasonal use rate:** Do not apply more than a total of 1.8 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. Do not apply as the final spray of the season.
- **Preharvest Interval (PHI):** See section IX. Crop-Specific Information for each crop's preharvest 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 Sovran as the final spray of the season.
- Do not apply through any type of irrigation equipment.



II. CROP-SPECIFIC RECOMMENDATIONS

Apples

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 1 for specific recommendations for disease control. 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 1.

For powdery mildew, cedar apple rust, and frogeye leafspot/black rot control, begin applying at 1/2-inch green and continue preventative applications on a 10-14 day interval. To control flyspeck, sooty blotch, white rot (bot rot) and Brooks fruit spot, 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 1, making sure not to exceed the maximum seasonal use rate.

To reduce the potential development of resistance to Sovran, BASF recommends that the number of consecutive applications be limited to 3 before switching to an alternate effective nonstrobilurin fungicide for at least 2 applications. Thereafter, Sovran can be sprayed again for a maximum of 3 additional consecutive sprays. Do not apply Sovran as the final spray in the season.

Preharvest intervals do not apply within 30 days of apple harvest.

Pears, Quinces, Crabapples, Loquats, Mayhaws, Oriental Pears

Application Information

Apply Sovran at the rates and intervals described in Table 2. 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.

To reduce the potential development of resistance to Sovran, BASF recommends that the number of consecutive applications be limited to 3 before switching to an alternate effective nonstrobilurin fungicide for at least 2 applications. Thereafter, Sovran can be sprayed again for a maximum of 3 additional consecutive sprays. Do not apply Sovran as the final spray in the season.

Restrictions:

Preharvest interval: Do not apply within 30 days of harvest.

Table 1. Sovran Application Rates and Timing on Apples

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water	Rate per acre ¹
Scab	Begin at 1/2-inch green and repeat at 10-14 day intervals.	1.0-1.6 ounces	4.0-6.4 ounces ²
Cedar apple rust Frog-eye leafspot/black rot Powdery mildew	Begin at 1/2-inch green and repeat at 10-14 day intervals.		
Brooks fruit spot Flyspeck Sooty blotch White rot (Bot rot)	Apply Sovran at first or second cover and repeat at 10-14 day intervals.		

¹ The rates are based on a standard dilute spray of 400 gallons per acre.

² 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 2. Sovran Application Rates and Timing on Pears, Quinces, Crabapples, Loquats, Mayhaws, Oriental Pears

Disease	Application Interval	Sovran Rates	
		Rate per 100 gallons of water	Rate per acre ¹
Powdery mildew Scab	Begin at 1/2-inch green and repeat at 10-14 day intervals.	1.0-1.6 ounces	4.0-6.4 ounces ²

¹ The rates are based on a standard dilute spray of 400 gallons per acre.

² 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.

9/10

Application Information

Use **Sovran** fungicide as a protective spray at 3.2-5.6 ounces per acre as described in Table 3. BASF recommends using a minimum of 50 gallons of water per acre for early season application. Increase the water volume up to 200 gallons per acre as the amount of foliage increases.

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 4.0 ounces of **Sovran** per acre during periods of heavy infection pressure.

For powdery mildew control, begin sprays at pre-bloom 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. For downy mildew control, begin sprays at pre-bloom and continue on a 7-10 day schedule. Under conditions that favor severe downy mildew development, use 5.6 ounces of **Sovran** per acre making sure not to exceed the maximum seasonal use rate.

To reduce the potential development of resistance to **Sovran**, BASF recommends that the number of consecutive applications be limited to 3 before switching to an alternate effective nonstrobilurin fungicide for at least 2 applications. Thereafter, **Sovran** can be used again for a maximum of 3 additional consecutive sprays. Do not apply **Sovran** as the final spray in the season.

Restrictions:
Preharvest Interval: Do not apply within 14 days of grape harvest.

APPLICATION THROUGHOUT

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 4. To ensure good coverage, BASF recommends using a minimum of 50 gallons of water per acre.

To reduce the potential development of resistance to **Sovran**, BASF recommends that the number of consecutive applications be limited to 3 before switching to an alternate effective nonstrobilurin fungicide for at least 2 applications. Thereafter, **Sovran** can be used again for a maximum of 3 additional consecutive sprays. Do not apply **Sovran** as the final spray in the season.

Restrictions:
Preharvest Interval: Do not apply within 45 days of pecan harvest.

Table 3. Sovran Application Rates and Timing on Grapes

Disease	Application Interval	Sovran Rates Per Acre ¹
Grape black rot <i>Phomopsis</i>	Begin at bud break and continue on a 14 day interval.	3.2 - 4.0 ounces
Powdery mildew	Begin at pre-bloom 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
Downy mildew	Begin at pre-bloom and continue on a 7-10 day interval.	4.0 - 5.6 ounces

¹ At 4.8 ounces per acre, a maximum of 5 treatments per season can be applied. At 5.6 ounces per acre, a maximum of 4 treatments per season can be applied.

Table 4. Sovran Application Rates and Timing on Pecans

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

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:

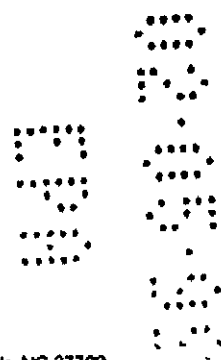
Common Name	Scientific Name
Apple powdery mildew	<i>Podosphaera leucotricha</i>
Apple scab	<i>Venturia inaequalis</i>
Brooks fruit spot	<i>Mycosphaerella pomii</i>
Cedar apple rust	<i>Gymnosporangium juniperi-virginianae</i>
Crabapple scab	<i>Venturia inaequalis</i>
Flyspeck	<i>Zygophiala jamaicensis</i>
Frogeye leafspot/black rot	<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>
Promopela cane and leaf spot	<i>Promopelta viticola</i>
Pome fruit powdery mildew	<i>Podosphaera spp.</i>
Quince scab	<i>Venturia pyrina</i>
Sooty blotch	<i>Gloeodes pomigena</i>
White rot (Bot rot)	<i>Botryosphaeria dothidea</i>

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.

Sovran is a registered trademark of BASF Corporation.

U.S. Patent Number 4,829,065 re. 33,989

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BASF Corporation
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BASF

Agricultural Products