



## ***FMC Agricultural Solutions Has Grape Diseases Covered***

Three different FRAC Groups controlling grape diseases such as powdery mildew, botrytis and phomopsis cane and leaf spot

**RHYME**<sup>™</sup>  
FUNGICIDE

- Superior powdery mildew control
- One of the most systemic DMI fungicides
- Works even where other DMI fungicides struggle
- Excellent crop safety
- FRAC Group 3

**FRACTURE**  
FUNGICIDE

- Great tool for resistance management
- Unique mode of action, a novel polypeptide a. i.
- Controls powdery mildew and botrytis
- Short REI and PHI coupled with low user toxicity
- FRAC Group M12 – The only one in this Class!

**SOVRAN**<sup>™</sup>  
FUNGICIDE

- Industry standard for phomopsis cane and leaf spot
- Established, reliable powdery mildew control
- Aids in the controlling of botrytis
- FRAC Group 11

## **Inside This Issue**

March 24, 2017

1. Rhyme<sup>™</sup> Fungicide
2. Fracture<sup>®</sup> Fungicide
3. Sovran<sup>®</sup> Fungicide

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**FMC**



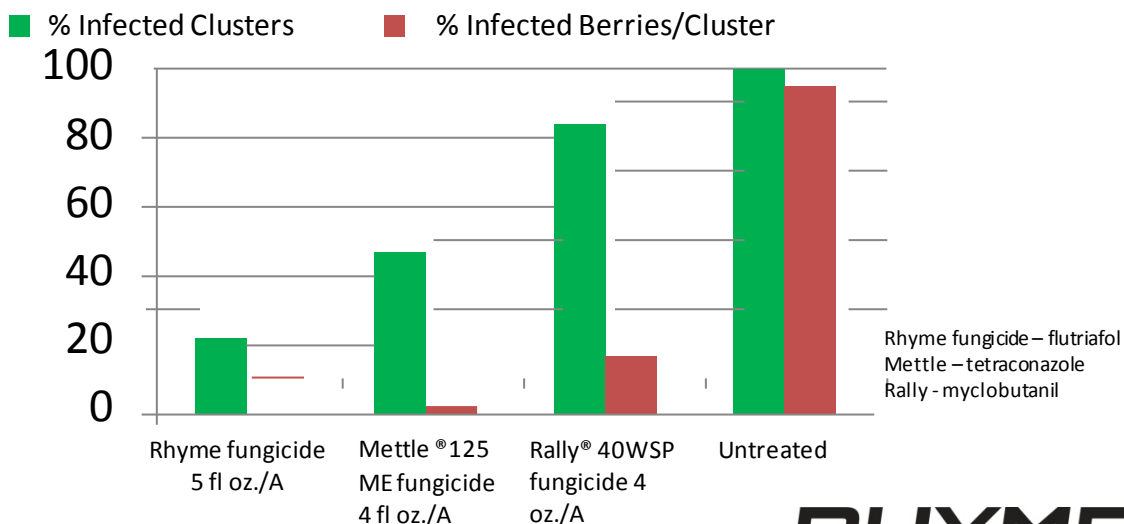
## What is Rhyme™ Fungicide?

Rhyme fungicide is one of the most systemic DMI fungicides and rapidly moves through the xylem to new shoots and leaves. Keeping powdery mildew out of the canopy protects developing fruit from infection. Rhyme fungicide belongs to the DMI (demethylation inhibitors) group of fungicides that interrupt the biosynthesis of sterols by fungi - FRAC Group 3. Years of testing have shown Rhyme fungicide is extremely effective in controlling powdery mildew in grapes, even in vineyards where other DMIs have lost activity.

## Rhyme Fungicide Best Practices

- Start Rhyme fungicide applications when there is 6 – 10 inches of shoot growth.
- Apply 5 fl oz./acre of Rhyme fungicide on a 14-21 day retreatment interval.
- Use the shorter interval when disease pressure is high or conditions favor disease development.
- Always rotate Rhyme fungicide in a program with other registered fungicides for powdery mildew control that are not in FRAC Group 3.

## Comparison of Triazole Fungicides for Powdery Mildew Control in Wine Grapes



Trial conducted by Larry Bettiga UCCE Gonzales, CA. 2013.  
All treatments included three initial applications of stylet oil.



## What is Fracture<sup>®</sup> Fungicide?

Fracture fungicide is a new & patented biological fungicide for preventive disease control in grapes. The active ingredient is “Banda de Lupinus albus doce” or BLAD, a novel polypeptide extracted from cotyledons of a lupine plant. Fracture fungicide has a unique mode of action and has been assigned a FRAC Group M12. It works by destroying the fungi’s cell wall and membrane.

## Fracture Fungicide Best Practices

- Fracture fungicide is a preventative and protectant fungicide.
- Apply before infection or at first signs of disease.
- Avoid using two preventative materials back to back.
- Coverage is important. Fracture fungicide is non-systemic so does not move within the plant.
- A nonionic surfactant can assist in improving coverage.
- Always use Fracture fungicide in a program with other registered fungicides effective on target diseases.

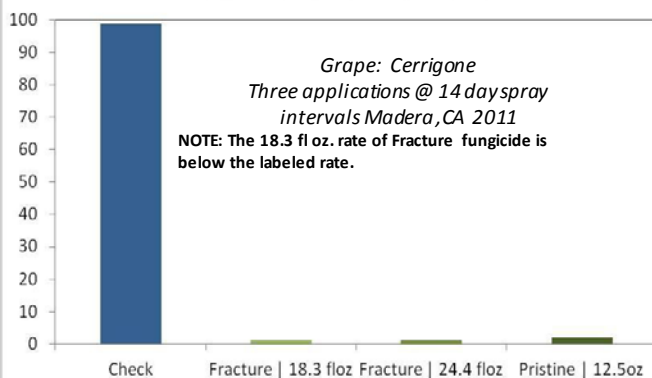
### Powdery Mildew

Apply Fracture fungicide @ 20.5 – 24.4 fl oz./a on a 14-day interval starting at bloom through veraison.

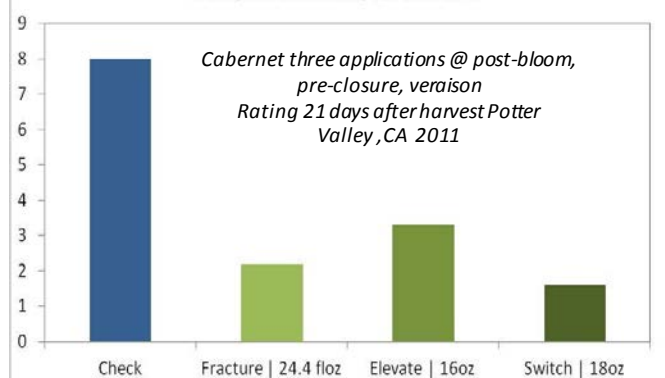
### Botrytis

Apply Fracture fungicide @ 24.4 – 36.6 fl oz./a from bloom thru pre-closure to control Botrytis bunch rot.

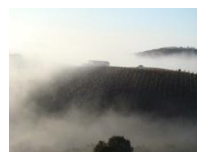
Powdery Mildew: % severity on bunches



Botrytis: % severity on bunches



# HatchTrak<sup>SM</sup>



## What is Sovran<sup>®</sup> Fungicide?

Sovran fungicide effectively controls powdery mildew, downy mildew, and phomopsis. It has surface systemic activity and has preventative and anti-sporulant activity on Powdery Mildew. It has excellent crop tolerance and very good rainfastness. Sovran fungicide belongs to the strobilurin class of fungicides in the FRAC Group 11, Mitochondrial Respiration inhibitors. The active ingredient is Kresoxim-methyl formulated as a 50 percent water dispersible granule (WG). Sovran fungicide fits very well in most Grape disease programs. It is the highest rated stand alone Phomopsis cane and leaf spot fungicide: Source- Department of Plant Pathology, UC Davis

Fungicide	Resistance risk (FRAC#)	Powderymildew	Downymildew	Rot		Phomopsis cane and leaf spot	Eutypa dieback	Bot Canker	Dead Arm (Phomopsis sp.)
				Botrytis bunch rot	Summer rot				
Sovran	high (11)	++++	++++	++	++	++++	—	—	—

## Sovran Fungicide Best Practices

- For phomopsis and powdery mildew begin applications at bud break and continue applications on a 14 day interval.
- Under low disease pressure the interval can be extended to 21 days.
- Apply 3.2 to 4.8 oz./A Use the higher rate under heavy disease pressure.
- These application rates and timings will also suppress Botrytis Bunch Rot.
- Tank mixing with organosilicone based adjuvants may burn the youngest leaves of some varieties. These symptoms are usually only cosmetic and disappear quickly.
- Always apply Sovran fungicide in rotation with a different mode of action such as Rhyme<sup>™</sup> fungicide , Fracture<sup>®</sup> fungicide or other non FRAC 11 group fungicides.

**SOVRAN**  
FUNGICIDE

888-59-FMC-AG FMCCROP.COM

Always read and follow label directions. NOTE REGARDING RESTRICTED USE PESTICIDES: Anthem ATZ herbicide; Athena insecticide, Brigade 2EC Insecticide/Miticide, Brigade WSB Insecticide/Miticide, Brigadier Insecticide Capture 3RIVE 3D insecticide, Capture LFR Insecticide, Declare insecticide, Hero Insecticide, Mustang Insecticide, Mustang Maxx Insecticide, Pounce 25WP Insecticide, Stallion Brand Insecticide, Ethos XB Insecticide/Fungicide and Gladiator Insecticide/Miticide are Restricted Use Pesticides. NOTE FOR CALIFORNIA: Accurate Extra herbicide, Aim EC herbicide, Anthem herbicide, Anthem ATZ herbicide, Anthem Flex herbicide, Anthem Maxx herbicide, Authority Assist herbicide, Authority Elite herbicide, Authority First DF herbicide, Authority Maxx herbicide, Authority MTZ DF herbicide, Authority XL herbicide, Cadet herbicide, Chisum Herbicide, Command 3ME microencapsulated herbicide, Crusher Herbicide, Edition Broadspec herbicide, Edition Tankmix Herbicide, Marvel herbicide, Nimble Herbicide, Nuance Herbicide, Preemptor, Report Extra Herbicide, Solstice herbicide, Spartan 4F herbicide, Spartan Charge herbicide, Spartan Elite herbicide, Zeus Prime XC herbicide, Zeus XC herbicide, Capture 3RIVE 3D insecticide, Ethos XB Insecticide/Fungicide, Hero Insecticide, Mustang Maxx Insecticide, Topguard Fungicide Specialty Crops fungicide, Display cotton harvest aid are not registered for sale or use in California. Beleaf and Carbine are trademarks of Ishihara Sangyo Kaisha, Ltd. Cercobin is a trademark of Nippon Soda Co., LTD. Sovran is a registered trademark of BASF. FMC, 3RIVE 3D, Accurate, Aim, Anthem, Athena, Authority, Brigade, Brigadier, Cadet, Capture, Chisum, Command, Crusher, Declare, Display, Edition, Ethos, Fortix, Fracture, Fyfanon, Gladiator, Hero, Koverall, LFR, Marvel, Mustang, Nimble, Obey, Pounce, Preemptor, Report, Rhyme, Rovral, Shark, Solida, Solstice, Spartan, Stallion, Topguard Terra and Zeus are trademarks and HatchTrak and "Investing in farming's future" are service marks of FMC Corporation or an affiliate. ©2016 FMC Corporation. All rights reserved.

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