The 2017 testing season in New York was a great acid test for fungicide testing. Fracture® fungicide performed well when tested alone and added additional efficacy to a rotational program entered into the trial by Dr. Wayne Wilcox. Though data was not collected in the powdery mildew trial, botrytis gray mold was noticeably absent in the grape clusters at the end of the season.

With a Fungicide Resistance Action Committee (FRAC) code BM01, Fracture fungicide provides a unique mode of action to insert into your fungicide rotation to control the most troublesome diseases in grape production. As part of a program approach, Fracture fungicide can take some of the pressure off the other fungicides, especially those for botrytis that don’t seem to work like they used to and protect the crop quality you have worked so hard to achieve.

Fracture Fungicide Label Fast Facts
Formulation: 2.1 lbs. ai/gal. suspension concentrate (SC)
Package size: 1 gallon
Signal Word: Caution
REI: Four hours
PHI: One day

Fracture Fungicide Use in Grapes
Number applications per season: Five
Minimum spray volume: 40 GPA
Use rates:
  - Botrytis gray mold: 24.4-36.6 fl. oz./A
  - Powdery mildew: 20.5-24.4 fl. oz./A
  - Sour rot suppression\(^1\): 24.4-36.6 fl. oz./A

\(^1\) Labeled for use in to 2ee recommendation in: CT, DE, ID, IL, IN, KY, ME, MD, MI, NH, NJ, NY, OH, OR, PA, RI, VT, VA, WV, WA, WI
Summary
- Fracture fungicide in a standard rotational program with Vivando® fungicide, Luna® Experience fungicide and Microthiol® Disperss® fungicide provided 95 percent control of powdery mildew incidence and almost complete control (99 percent) of powdery mildew severity on chardonnay grapes in an extremely heavy disease year.

50 GPA pre-bloom; 100 GPA post-bloom
Adjuvant used in all applications.

Summary
- The performance of Fracture biological fungicide rivals those of the traditional heavy hitting conventional products.
- Fracture fungicide provided the best control of botrytis incidence of Vignole clusters numerically.
- At 78 percent control of botrytis in Vignole grape clusters, Fracture fungicide was the second best performer numerically.

Application Dates: 1 = 23 June; 2 = 19 July; 3 = 1 Sept.; 4 = 15 Sept.
50 GPA at bloom; 100 GPA post-bloom
0.125% v/v adjuvant used in all applications.
Seeing is Believing: The Performance of Fracture® Fungicide in Chardonnay Grapes

No fungicide check (above)

24 fl. oz./A Fracture® fungicide (above)

24 fl. oz./A Fracture fungicide (1,3,5,7) 10 fl. oz./A Vivando® fungicide (2) 6 fl. oz./A Luna® Experience fungicide (4)
5 lbs./A Microthiol® Disperss® fungicide (6)
Research conducted by Wayne Wilcox at Cornell University in 2015 demonstrates the benefit of managing spotted wing drosophila (SWD) with Mustang® Maxx insecticide and Fracture® fungicide.

SWD oviposition is believed to directly introduce yeasts and bacteria that cause fruit rots and/or create wounds, allowing natural infection to occur. Using a two-pronged approach with Mustang Maxx insecticide to reduce the SWD population and Fracture fungicide programs to combat fruit rots will aid in protecting the quality of grapes through harvest.

The Mustang Maxx insecticide Section 3 label for vinegar flies and SWD allows for 4 fl. oz./A to be applied using a seven-day interval for a maximum use of 24 fl. oz./A/season. Thorough spray coverage is necessary with 10 GPA minimum by ground and 2 GPA minimum spray volume by air. PHI is one day.

Grape Sour Rot Control, 2015
Wayne F. Wilcox, Cornell University
In a split-plot trial with four replications, conducted in a research vineyard of the Vitis interspecific hybrid cv. Vigneole, we applied the following antimicrobial treatments both with and without the insecticide Mustang Maxx, which is active against Drosophila spp.:
• No antimicrobial treatment
• Potassium metabisulfite (KMS), 1% weekly, starting at 15° Brix
• Oxidate 2% weekly, starting at 15° Brix
• Fracture Once at 15° Brix
• Fracture weekly, starting at 15° Brix
• KMS, 1% weekly starting at first symptom appearance
• Oxidate 2% weekly, starting at first symptom appearance
• Fracture weekly, starting at first symptom appearance
Mustang Maxx insecticide is a Restricted Use Pesticide. Always read and follow all label directions, restrictions and precautions for use. Some products are not registered for sale or use in all states. FMC, Mustang Maxx and Fracture are trademarks and HatchTrak is a service mark of FMC Corporation or an affiliate. Vivando is a registered trademark of BASF. Luna is a trademark of Bayer. Microthiol and Disperss are trademarks of United Phosphorous, Inc. Elevate is a trademark of Arysta LifeScience North America, LLC. Luna is a trademark of Bayer. Switch and Vangard are trademarks of a Syngenta Group Company. OxiDate is a trademark of BioSafe Systems, LLC. ©2018 FMC Corporation. All rights reserved. 05/18