

USE PLANT PROTECTION PRODUCTS SAFELY AND WITH RESPONSIBLE CARE. PLEASE ALWAYS FOLLOW THE LABEL WHEN APPLYING PLANT PROTECTION PRODUCTS.

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ZORVEC™  
**Vinabria®**  
**FUNGICIDE**

# THIS CHANGES EVERYTHING

## BETTER CROP MANAGEMENT FOR BETTER BUSINESS.

New Zorvec™ Vinabria® provides an unmatched combination of consistency and control of downy mildew that can be used every season to help achieve a better crop, even under challenging conditions.



Zorvec™ Vinabria® at a glance

Zorvec™ Vinabria® is based on Zorvec® active fungicide which is the first member of a novel class of fungicides to control diseases caused by oomycete pathogens. Zorvec offers an unmatched combination of consistency and longer-lasting disease control, helping you yield healthier, more uniform grapes for better business.

Zorvec affects a novel target site with a completely new biochemical Mode of Action and has no cross-resistance with existing fungicides. It produces multiple effects on the pathogen's life cycle for better efficacy and length of control. Zorvec protects treated leaves as they grow and expand, including leaves that are less than 20% of their final size at the time of application.

For these reasons, Zorvec is a crop protection technology with the potential to provide many benefits to growers, including lower operational costs and overall improved farm management efficiency.

Active substance	<b>Zorvec™</b> ISO common name: oxathiapiprolin Chemical class: piperidinyl thiazole isoxazoline	<b>Folpet</b> Chemical class: phthalimides
Mode of Action (MoA)	OSBPI (Oxysterol binding protein inhibitor)	Multi-site contact activity
FRAC classification	Group 49 (F9)	Group M4
Formulation	Concentrate Solution (SC) containing 10 g/L Zorvec® and 500 g/L Folpet	
Application rate and disease spectrum	2L/ha for downy mildew control ( <i>Plasmopara viticola</i> ) in grapes 2 applications per season from BBCH 13 to BBCH 71	
Application method	Foliar application	

Target crops and diseases

Zorvec™ Vinabria® will be registered for use on wine grapes and table grapes. Zorvec Vinabria controls downy mildew (*Plasmopara viticola*) at low dose rate per hectare.

Zorvec™ ranking on grapes

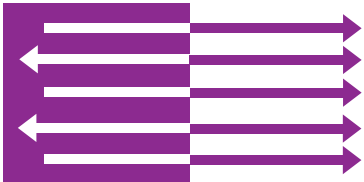
Zorvec® vs competing products at commercial rates					
Active ingredient	Rainfastness	Multiple effects on the pathogen's life cycle		Translaminar activity	Systemic
		Preventative	Curative*		
Zorvec®	+++	+++	++	+++	++
Fluopicolide + fosetyl-Al	not tested by DuPont at this time	++	-	+	+
Cyazofamid + disodium phosphonate	++	++	++	-	-

Source: DuPont European Research and Development Center, France (2012)

\* Zorvec® will be recommended in a preventive manner.

Key attributes and benefits of Zorvec™ Vinabria®

NO CROSS RESISTANCE with any current fungicides



- Provides growers with a new tool to fight downy mildew
- Ensures better efficacy and length of control of the overall programme

RAINFAST



AFTER 20 MINUTES

- Allows for flexibility when weather causes a delay in the application
- Reduces the need for re-sprays and unscheduled applications

PROTECTION OF new growth



- Systemic movement to new and emerging leaves
- Essential for maximising leaf protection and yield when the crop is established

Consistent performance compared to competitors in the field

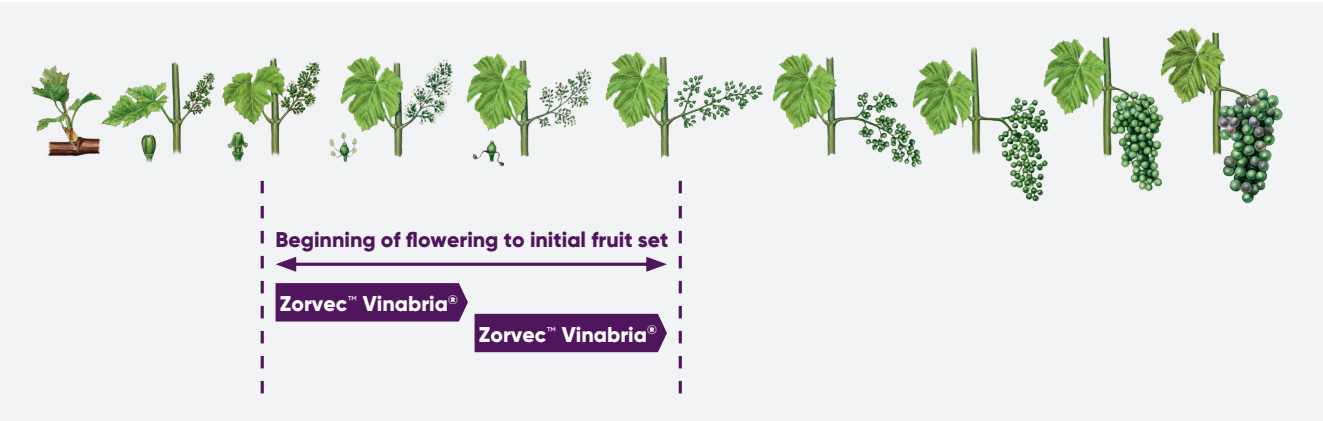
In several trials across countries, Zorvec™ Vinabria® demonstrated outstanding control of downy mildew compared to current benchmark products. Thus, Zorvec Vinabria will help growers to better manage their crops for better business.



Source: DuPont, France (2016)

Technical positioning

The target growth stage for Zorvec™ Vinabria® starts at the beginning of flowering until the initial fruit set for maximum downy mildew control, vigorous crops and better management.



Zorvec Vinabria is recommended in a block of two preventive applications at an interval of 10 to 14 days. It can provide up to 28 days of protection to the crop at its most vulnerable stage. No further application is recommended after fruit set.

Resistance Management

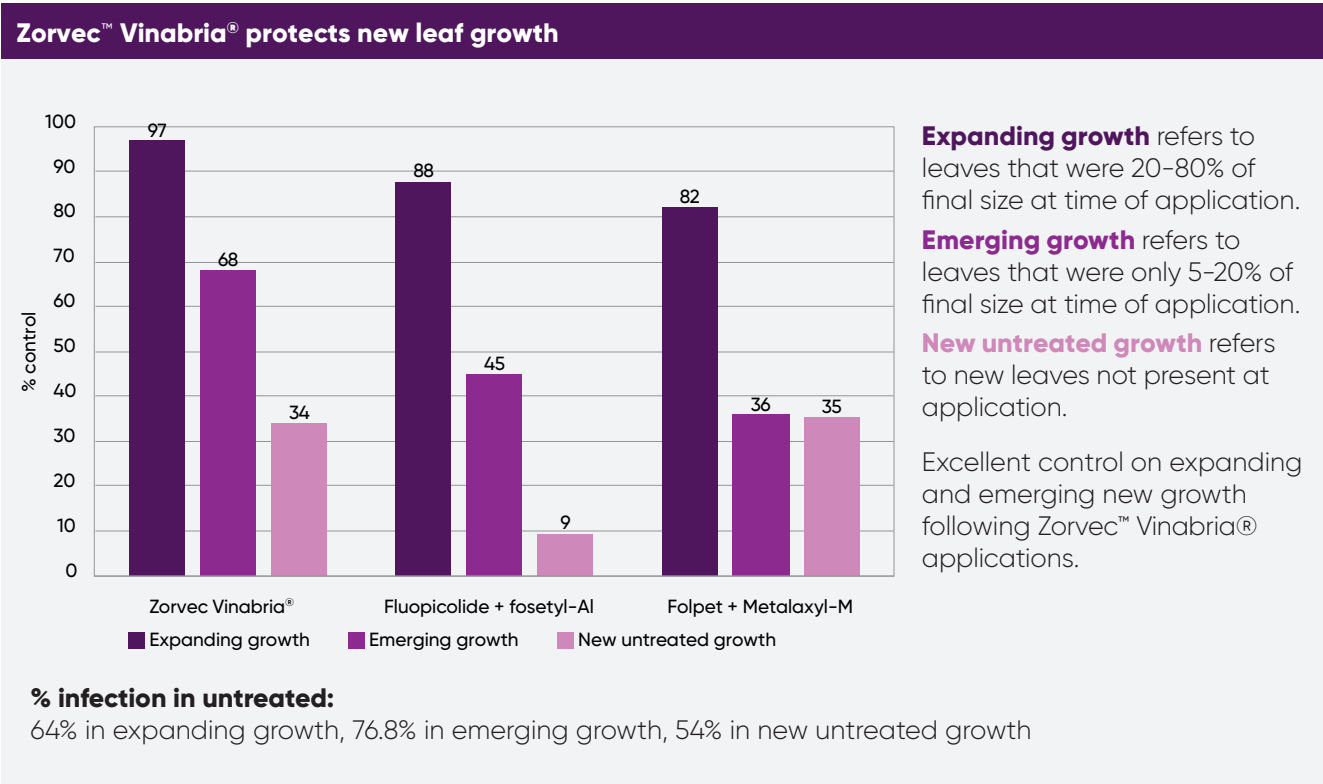
The following table summarises the recommendations of DuPont for proactive resistance management.

Strategy	Tactics
Limit exposure	<div>1. Limit the number of applications to 2* maximum per season and rotate with other modes of action for the rest of the spray programme.</div> <div>2. Prefer block applications to alternation.</div> <div>3. Apply preventively.</div> <div>4. Always follow the recommended spray interval.</div>
Slow pathogen growth	<div>1. Follow prophylactic practices as much as possible.</div>
Contain the resistant isolates <div>- Reduce survival</div> <div>- Reduce spread</div>	<div>1. Follow Zorvec™ Vinabel® with a highly effective, preferably curative product.</div> <div>2. Use preferably in first half of season.</div>

(\*) or less in case of regulatory restrictions

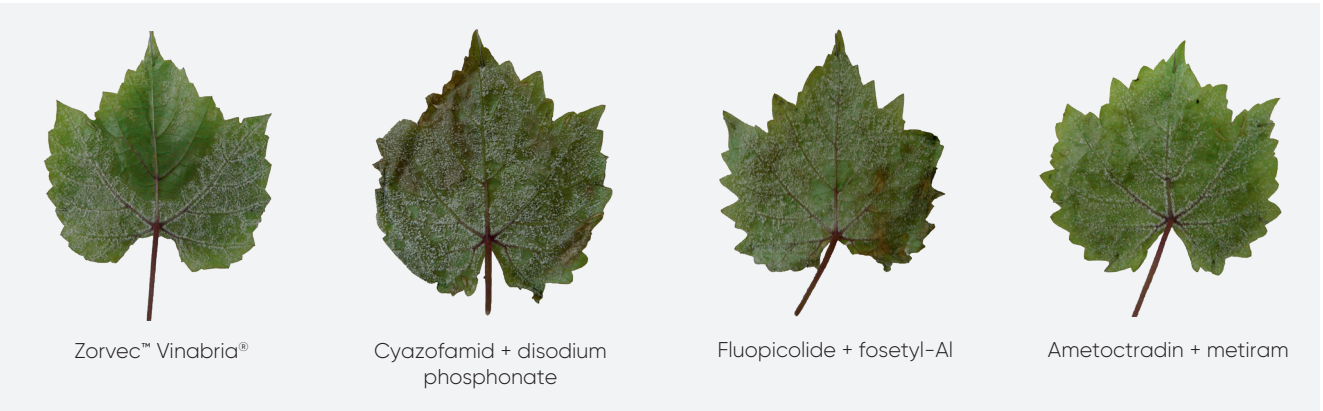
Secure foliage protection to ensure the best harvest

Zorvec™ Vinabria® offers outstanding protection of established and new plant growth for better crop establishment, healthier plants and a more profitable harvest. It helps to eliminate the spread of disease for higher quality and reduced blemishes. The leaves appear more uniform for better consistency, yield and quality.



Systemic movement

In the following trial, the upper side of the leaf was treated while the underside was inoculated with the pathogen and rated. As these photos show, the translaminar movement of Zorvec™ Vinabria® protects the underside of the leaves. Its translaminar and xylem systemic movement enables uniform coverage of sprayed foliage and protection from wash-off by rain.

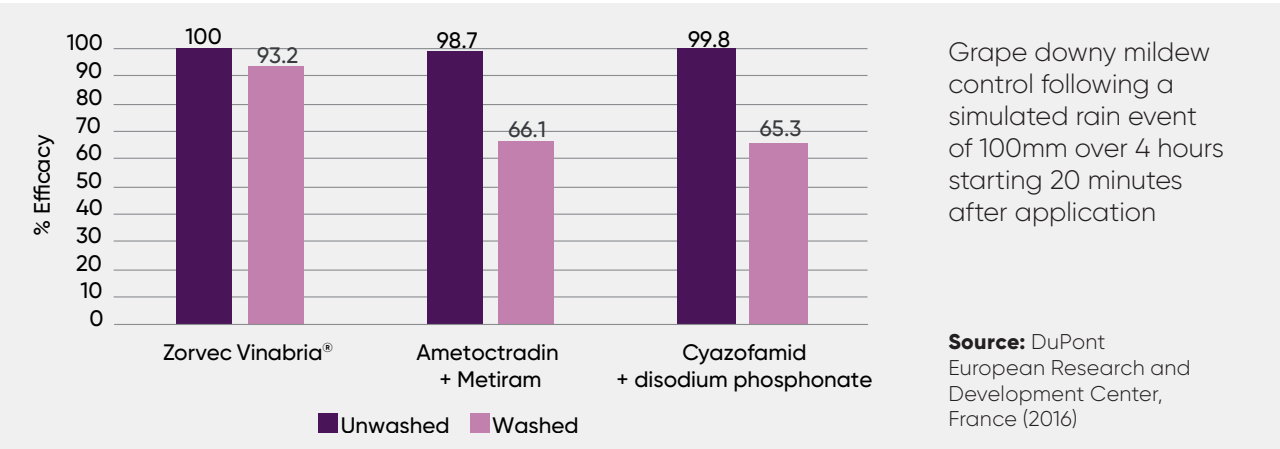


Whole plant studies, DuPont European Research and Development Center, France (2012–2015)



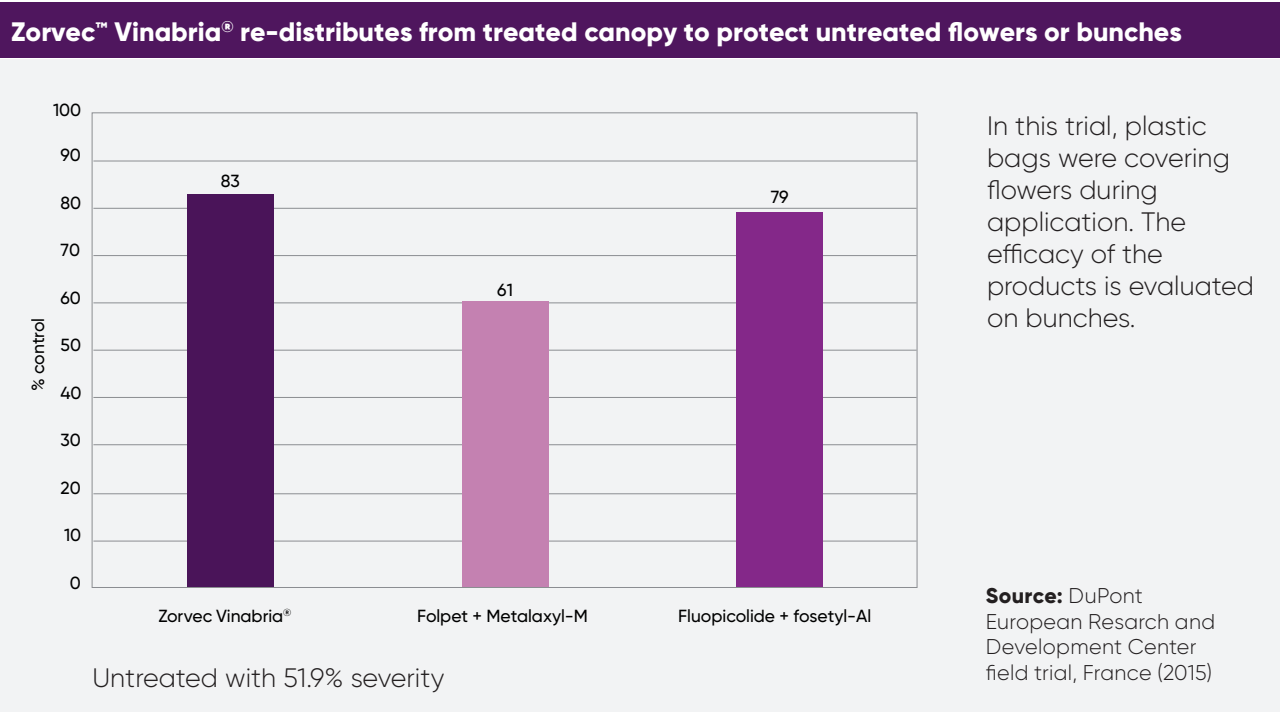
Outstanding rainfastness for better crop management

Zorvec™ Vinabria® is quickly absorbed on and within the plant epicuticular waxy layer for superior rainfastness just 20 minutes after application. This helps growers to reduce the need for re-sprays due to rain after or during the application so that larger areas can be covered. They can also take advantage of tighter application windows when the weather is uncooperative.



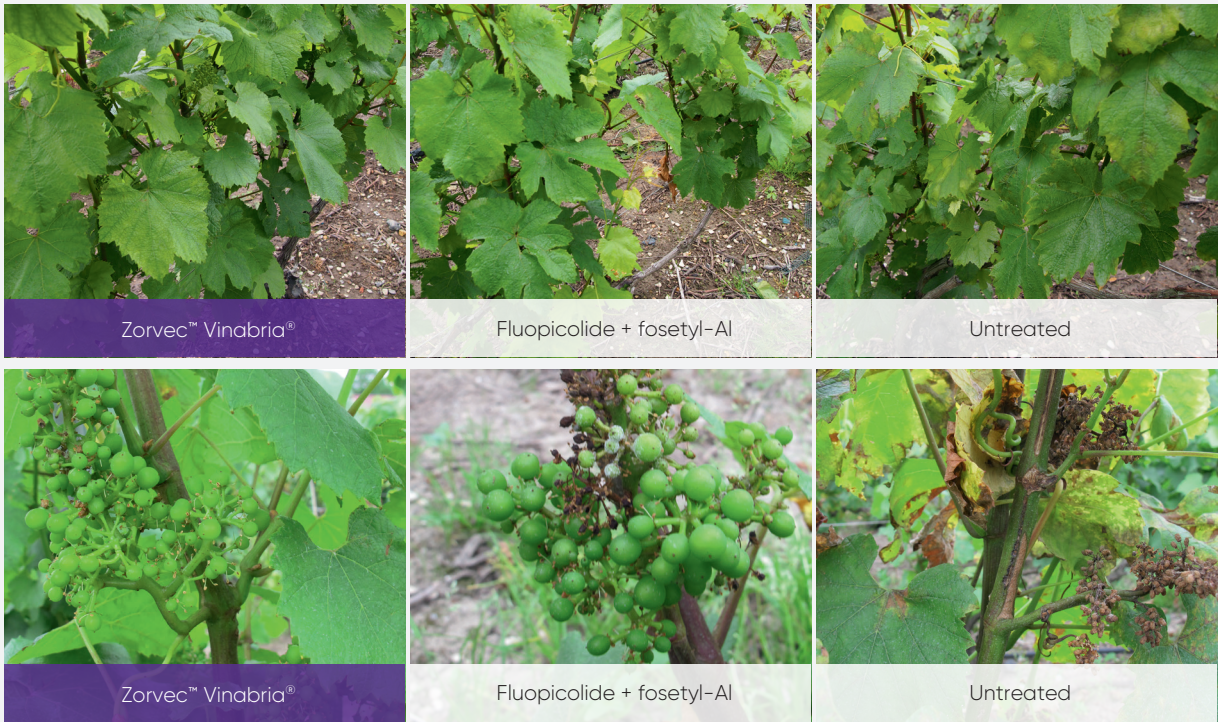
Excellent re-distribution for better business

Zorvec™ Vinabria® redistributes from treated canopy to protect untreated flowers and bunches. This ensure the best coverage and the best protection at the critical stages of the crop. This gives more peace of mind to growers to cope with other activities on the vineyard.



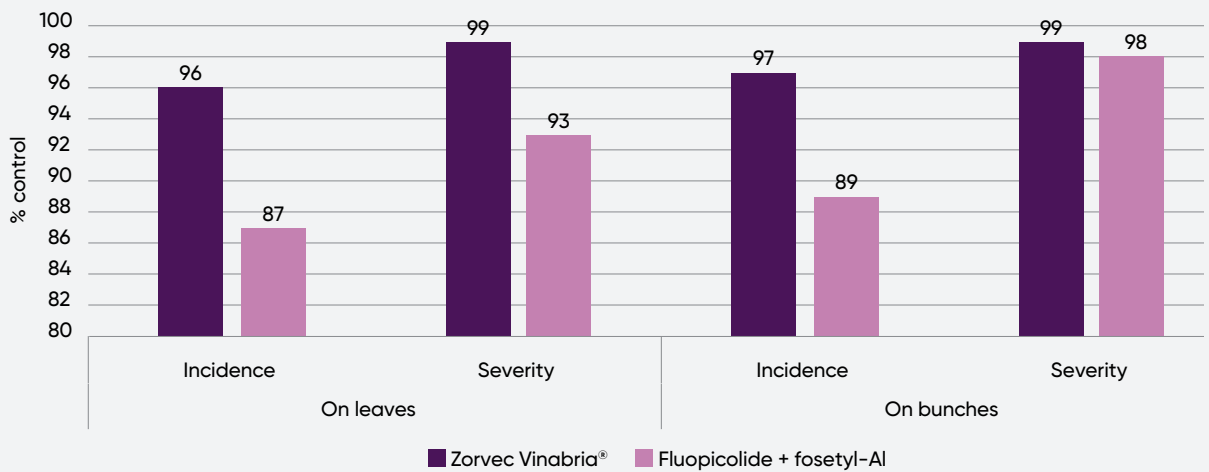
Zorvec™ - positioning trials on wine grapes

The following trial shows the programme with 2 applications of Vinabria® at flowering compared to current standard programmes.



Source: DuPont, France (2016)

Zorvec™ Vinabria® can consistently provide outstanding control



Positioning trials with 2 applications of Zorvec™ Vinabria® at flowering.  
**Untreated control leaves:** 52% incidence and 15% severity.  
**Untreated control bunches:** 50% incidence and 20% severity.

Source: DuPont, average of 6 trials in Italy (2016)