



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

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ZORVEC™  
**Endavia®**  
**FUNGICIDE**

# THIS CHANGES EVERYTHING

## BETTER CROP MANAGEMENT FOR BETTER BUSINESS

New Zorvec™ Endavia® fungicide provides an unmatched combination of consistency and control of potato late blight that can be used every season to help achieve better crops, even under challenging conditions.



Zorvec™ Endavia® at a glance

Zorvec™ Endavia® 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 potato crops 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. Zorvec Endavia provides an unmatched combination of consistency and control that can be used every season to attain better crop yields, even in challenging conditions.

Active substances	<b>Zorvec®</b> 30g a.i./L ISO common name: oxathiapiprolin Chemical class: piperidinyl thiazole isoxazoline	<b>Benthiavalicarb</b> 70g a.i./L Chemical class: Valinamide carbamate
Mode of Action (MoA)	<b>OSBPI (Oxysterol binding protein inhibitor)</b>	<b>CAA (Carboxylic acid amides)</b>
FRAC classification	<b>Zorvec: Group 49 (F9)</b>	<b>Benthiavalicarb: Group 40 (H5)</b>
Formulation	<b>Oil dispersion (OD) containing 30 g/L Zorvec and 70 g/L benthiavalicarb</b>	
Application rate and disease spectrum	<b>0.4 L/ha on late blight (Phytophthora infestans) Max 4 applications per season</b>	
Application method	<b>Foliar application</b>	

Target crops and diseases

Zorvec™ Endavia® will be registered for use on potatoes and other vegetables like tomatoes, aubergines, courgettes, cucumbers, melons, watermelons and onions. Zorvec Endavia controls both late blight (*Phytophthora infestans*) and downy mildew (*Alternaria solani* and *A. alternata*) at very low dose rates per hectare.

Zorvec™ ranking on potatoes


Zorvec® vs competing products at commercial rates								
Fungicide	Rainfastness	Preventative	Curative*	Anti-sporulant*	Stem blight	Mobility		
Zorvec®	+++	+++	++	+++	+++	S + T	++	Good
Fluopicolide + propamocarb	++(+)	+++	++	++(+)	++	S + T	+	Moderate
							-	Poor

Source: Ratings for Zorvec® based on internal data (2012-2014). For competing products based on Euroblight rating (2012).

S: Systemic activity T: Translaminar activity  
\* Zorvec® will be recommended in a preventative manner.

Key attributes and benefits of Zorvec™ Endavia®

**DELIVERS 3–4 MORE DAYS**  
of disease control




**THAN THE COMPETITION**  
even under high disease pressure

Depending on environmental conditions.

- Robust spray intervals even under extreme disease pressure
- Reduction in frequency of sprays


**RAINFAST**



**AFTER 20 MINUTES**

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

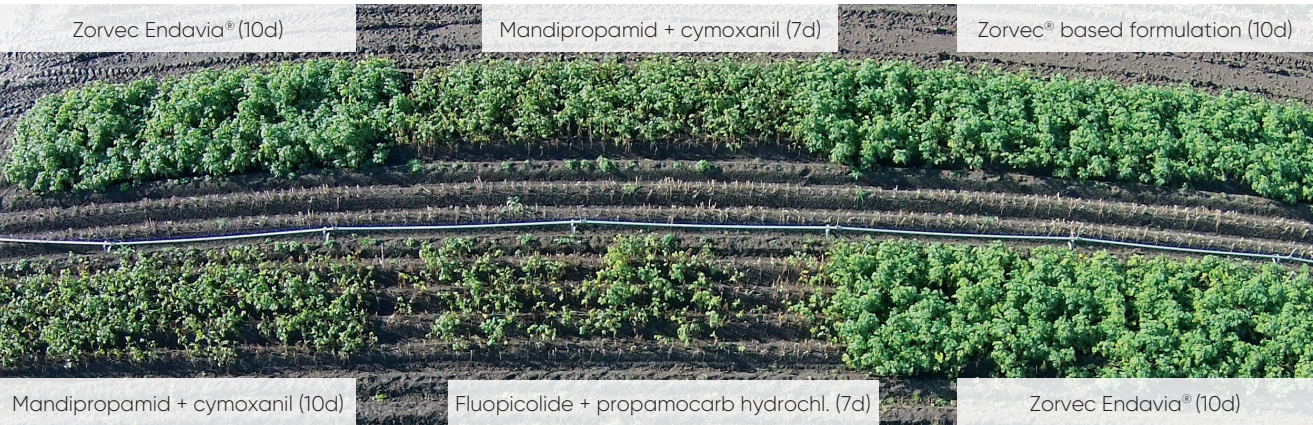
**PROTECTION OF new growth**



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

Consistent performance compared to competitors in the field

Since 2014, DuPont has been conducting trials to compare late blight prevention techniques. One block consisted of 3 Zorvec™ Endavia® applications at 10-day intervals, while the reference programme consisted of 4 applications of competing products at 7-day intervals. The following summarises the 2015 trials. In those trials, in order to keep the disease under control in the reference programme, some additional curative products like cymoxanil or propamocarb + cymoxanil had to be added to the initial plan.

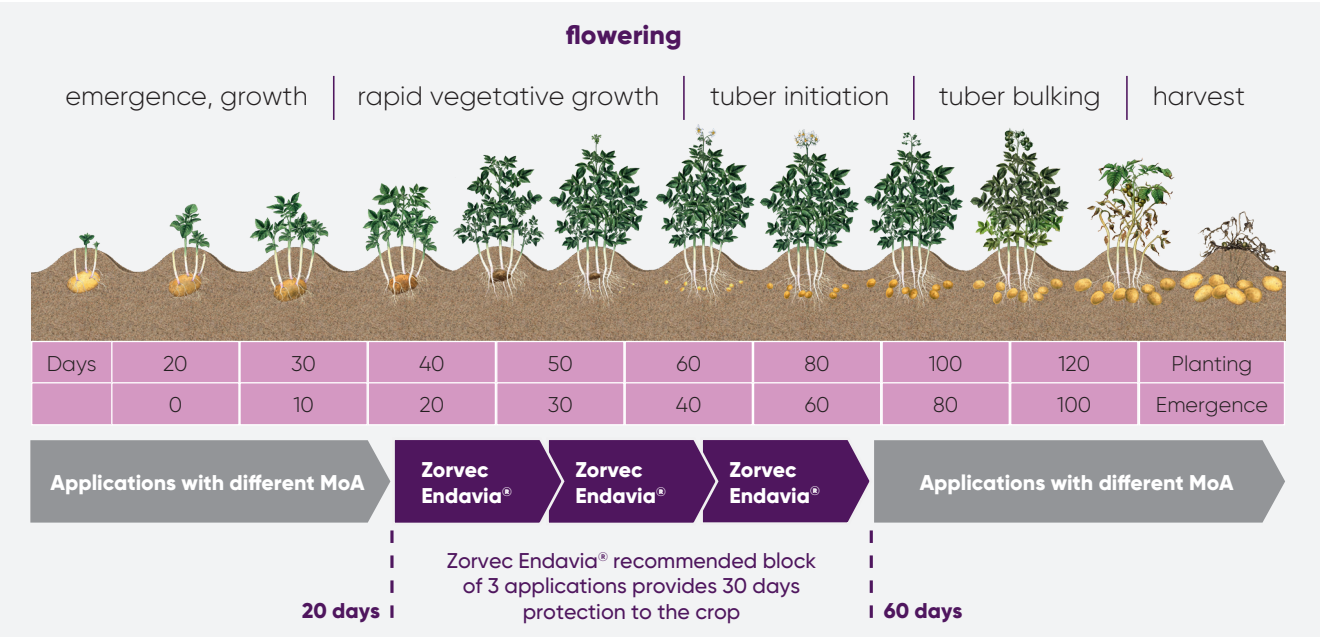


New Zorvec Endavia provides an unmatched combination of consistency and control of potato late blight that can be used every season to help achieve better crops, even under challenging conditions.



Recommended application of Zorvec™ Endavia®

The target growth stage for Zorvec™ Endavia® starts with rapid growth and continues into flowering for maximum late blight control, vigorous crops and better management.



The use of Zorvec Endavia shall not exceed 33% of the total number of fungicide applications targeting late blight or 4 applications per crop, whichever is lower. Do not make more than 3 consecutive applications in alternation with a product that has a different Mode of Action (MoA). In cases of heavy disease pressure, the spray interval can be reduced to 7 days.

Resistance Management

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

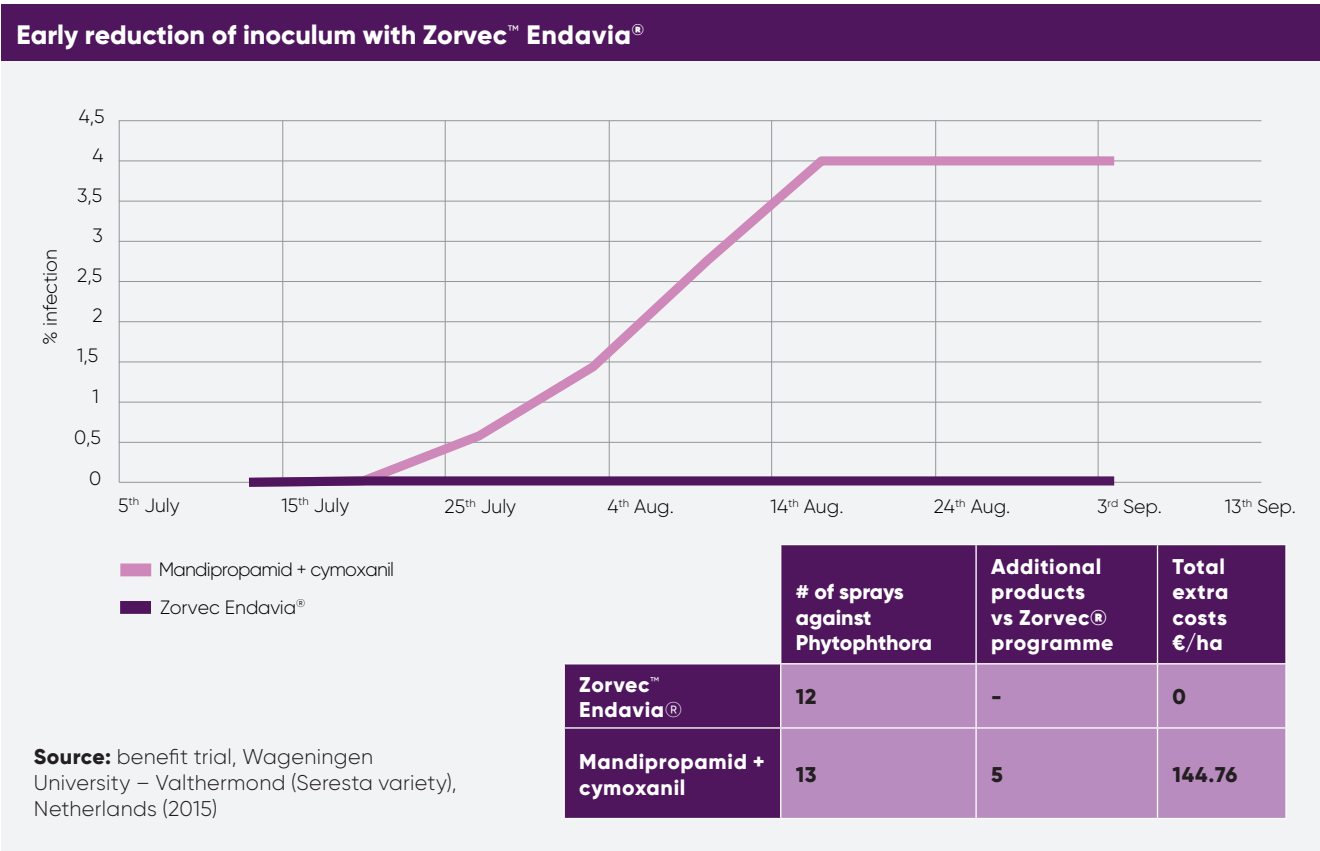
Strategy	Tactics
Limit exposure	<b>1. Limit the number of applications to 4* maximum per season (no more than 3 times in sequence), and rotate with other MoA for rest of the spray programme.</b> <b>2. Prefer block applications to alternation.</b> <b>3. Apply preventively.</b> <b>4. Do not stretch the spray interval.</b>
Slow pathogen growth	<b>1. Follow prophylactic practices as much as possible.</b>
Contain the resistant isolates - Reduce survival - Reduce spread	<b>1. Follow Zorvec™ Endavia® with a highly effective, preferably curative product.</b> <b>2. Use preferably in first half of season.</b>

(\*) or less in case of regulatory restrictions

Early optimised protection programme

Zorvec™ Endavia® offers outstanding protection. The spread of disease can be stopped early and blemishes are reduced. Growers have the opportunity to reduce sprays in their protection programme and thereby save costs.

In this trial below, Zorvec Endavia in a block of 3 applications at 10-day intervals during the rapid growth phase reduced the inoculum right from the start and maintained it at low levels across the crop cycle. The reference product in this case with 4 applications at 7-day intervals could not control the inoculum level and the disease spread in the field despite 1 additional spray and 4 additional curative products added after the block.



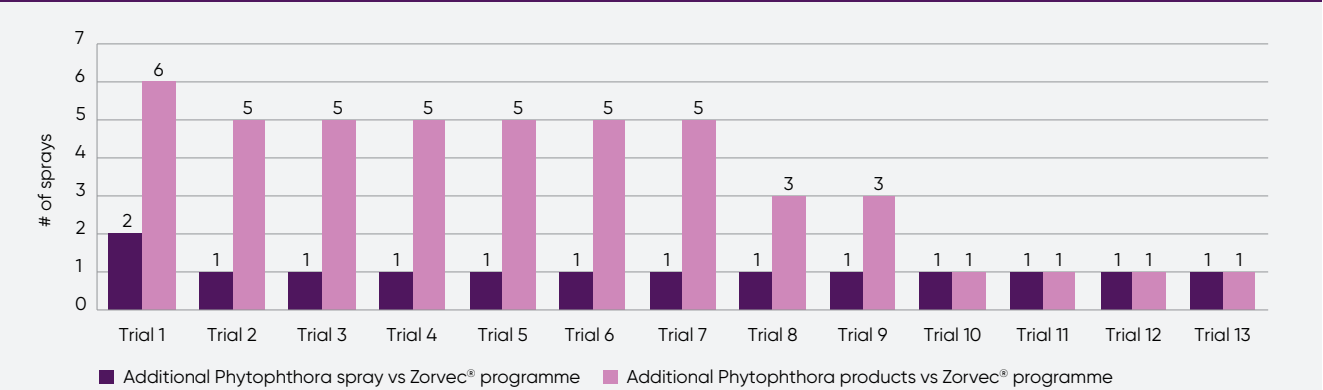
Zorvec™ Endavia® offers outstanding protection of established and new growth, contributing to healthier plants and more profitable harvests.



Better farm management

Zorvec™ Endavia® provides 3-4 more days of control when compared to competing products, even under high pressure and challenging conditions. Growers have more flexibility in spray timing, can better manage labour costs and work, and potentially reduce the number of applications for further optimisation.

Additional sprays and products compared to programmes with Zorvec™ Endavia®



- Three applications of Zorvec™ Endavia® (10-day spray interval) replaced four applications of the reference product (7-day interval). One spray could be saved.
- Due to high disease pressure, some additional products (mainly curative) had to be added to the reference programmes.
- Zorvec™ Endavia® provides 3-4 days longer lasting control, even under high pressure and challenging conditions.

Infection level (%)	After the block	At end of season
Zorvec™ Endavia®	0.5 %	1.5 %
Mandipropamid + cymoxanil	2.4 %	9.8 %

Unmatched combination of consistency and control

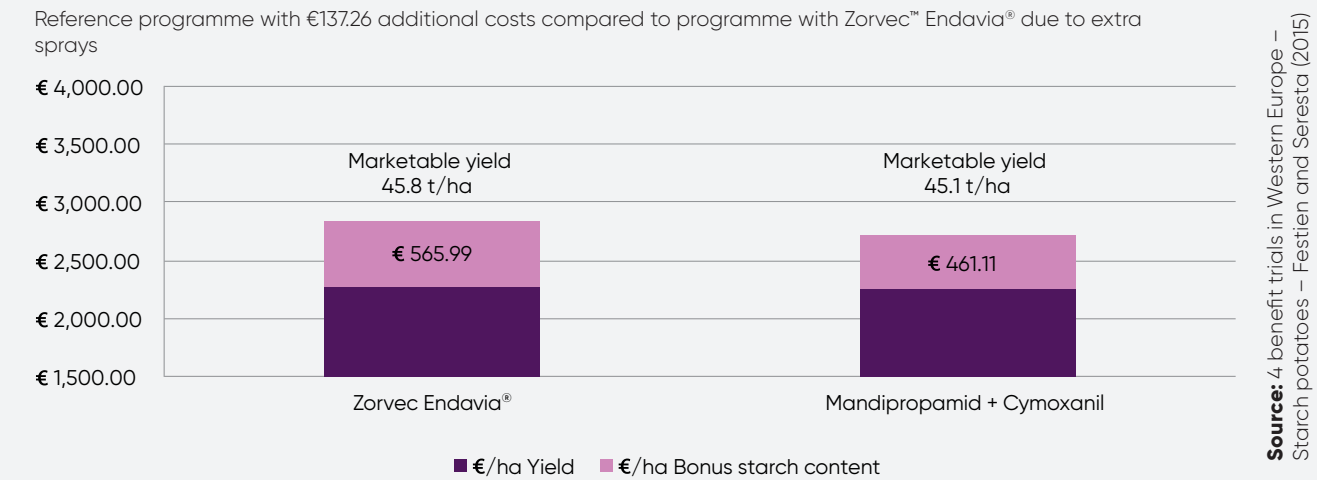
The well-known secret to maximising quality and yields is to keep clean foliage for as long as possible. Zorvec™ Endavia® helps growers reach their target marketable yields and at the same time helps reduce production costs and time expenditure.



Photo: Benefit trial – Netherlands – Lelystad trial July 19, 2016

Thanks to outstanding protection against late blight, Zorvec™ Endavia® provides the opportunity to optimise the marketable yield and starch content of potatoes.

Zorvec Endavia® helps to maximise yield and starch content

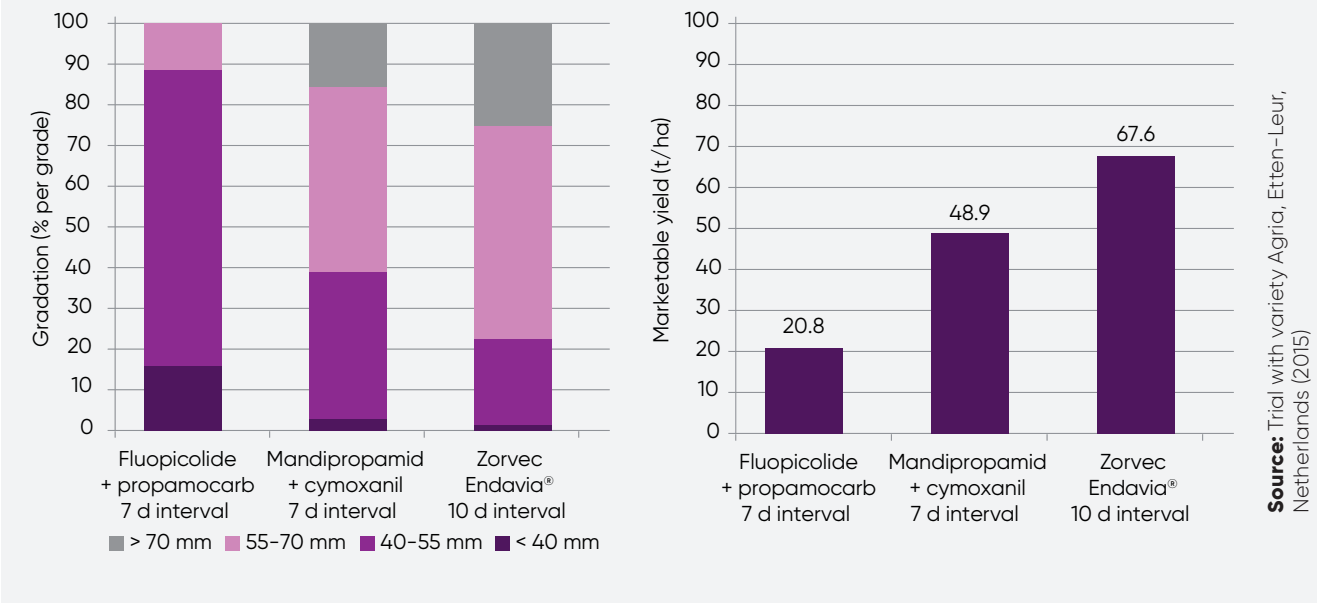


Source: 4 benefit trials in Western Europe – Starch potatoes – Festien and Seresta (2015)

Reference programme with €137.26 additional costs compared to programme with Zorvec™ Endavia®

Used early in the programme, Zorvec™ Endavia® enables the crop to thrive and reach its optimal potential. The trial below conducted in 2015 shows that a block of 3 applications of Zorvec Endavia at 10-day intervals helps to maximise the yield, but also to maximise the best qualities desired by the processors.

Zorvec™ Endavia® provides outstanding late blight control across countries



Source: Trial with variety Agria, Etten-Leur, Netherlands (2015)