

# Unique chemistries for bacterial and fungal potato disease protection



DuPont™ Tanos® fungicide controls late blight and brown spot and suppresses black dot and bacterial/aerial stem rot. Tanos also helps reduce the anxiety of slipping performance on some early blight strains as well as uncertain performance should late blight threaten.

### Applying Tanos will:

- Provide systemic bacterial protection
- Control unseen, hidden infections
- Inhibit lesion expansion and sporulation
- Deliver late and early blight spore eradication
- Supply improved redistribution properties

### Multiple modes of action

Tanos contains the active ingredient famoxadone (FRAC 11) for enhanced contact control of both early blight and late blight to:

- Deliver excellent rainfastness by fixing on and within the plant's cuticle waxes. Laboratory and field testing demonstrate Tanos is fully rainfast within an hour of application, and its excellent washoff resistance is unsurpassed by current fungicide standards.
- Provide more effective control of azoxystrobin/pyraclostrobin insensitive early blight strains.

Tanos contains cymoxanil (FRAC 27), the active ingredient in Curzate® 60DF fungicide, which provides unique “kick back” activity on late blight. While late blight may not strike each year, when it does it can be devastating and kill plants within two week if conditions are right.

**Table 1.** Tanos for disease control in potatoes

Before the rows close, open the door to a Tanos fungicide program for enhanced reliability				
Target disease	Rate	Recommended tank-mix partner <sup>1</sup> :	Recommended alternation partner <sup>2</sup> :	Fungicide spray interval
Early blight	6 oz/a	<b>Ground, chemigation or air:</b> mancozeb/Dithane F-45®, chlorothalonil or copper	<b>Ground, chemigation or air:</b> Vertisan® 16 - 24 fl oz/A	7 – 10 days
Brown spot				
Late blight <sup>3</sup>				
Black dot	6 – 8 oz/A			
Bacterial stem rot				
Aerial stem rot				

<sup>1,2</sup> Tanos must be applied in tank mix and in alternation with appropriate contact fungicides which have a different mode of action: EBDCs, such as mancozeb, chlorothalonil or copper are recommended. Do not tank mix or alternate with fungicides from EPA's Target Site of Action Group 11 (includes all strobilurins, Famoxate™ (famoxadone) and fenamidone).

<sup>3</sup> For best results, make 2 to 6 applications of Tanos tank mixed with and alternated with recommended contact fungicides. The number of Tanos applications will vary depending on the level of diseases present and the susceptibility of the variety planted.

## The industry standard for resistance management

Over the past several seasons, resistance management has become an important consideration for early blight control. The first strobilurin fungicide (azoxystrobin) was registered on potato in 1999 and the following year isolates of the early blight pathogen, *Alternaria solani*, were detected with reduced sensitivity to this fungicide. The shift in sensitivity to azoxystrobin, and also to pyraclostrobin, was approximately 10-fold, resulting in a significant loss in early blight disease control.

Research at North Dakota State University demonstrates Tanos® fungicide provides more effective control of *Alternaria solani* isolates with reduced sensitivity to azoxystrobin and pyraclostrobin. To maintain this effective control and provide the best protection against the risk of resistance development.

Tanos recommendations:

- Tank mix with a preventive contact fungicide with a different mode of action (such as chlorothalonil, mancozeb or copper) — thereby delivering two to three modes of action against early and late blight.
- Alternate with a fungicide with a different mode of action, such as mancozeb.
- Limit Tanos applications on potato to no more than 6 per season.

## Resistance Management

For early blight control, make fungicide applications on a 7-10 day interval. Use shorter intervals when disease is present in the area of if weather conditions favor disease development.

For preventive late blight control, make fungicide applications on a 7-10 interval. When weather conditions favor late blight development or late blight is present in the area, use the 8 oz/acre rate of Tanos and shorten interval to 5-7 days.

## Application equipment

Apply Tanos by ground, air or chemigation with properly calibrated equipment and suitable water volume to ensure thorough coverage.

## For more information

For more information about a Tanos programs in potato production, please contact your local territory manager.

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