2023-2025 Potato Variety Postharvest Disease Responses

MSU Potato & Sugar Beet Pathology
Cruz, Ruth, and Willbur

Chip Varieties

Dry rot

Resistant	Moderately Susceptible	Susceptible
Snowden ***	MSBB058-1 **	Lamoka **
Bliss (NY163) ***	MSAFB635-15 **	Mackinaw **
		Dundee **
		MSDD247-07 **
		MSDD247-11 **
		MSW474-1 *
		NY174 **

Pink rot

Resistant	Moderately Susceptible	Susceptible
Bliss (NY163) ***	Dundee **	Lamoka **
MSAFB635-15 **	Mackinaw **	Snowden ***
MSBB058-1 **	MSDD247-07 **	
NY174 **	MSDD247-11 **	
	MSW474-1 *	

Pythium leak

Resistant	Moderately Susceptible	Susceptible
Bliss (NY163) ***	Dundee **	Mackinaw **
MSAFB635-15 **	Lamoka **	NY174 **
	MSBB058-1 **	Snowden ***
	MSW474-1 *	MSDD247-07 **
		MSDD247-11 **

Soft rot

Resistant	Moderately Susceptible	Susceptible
Snowden ***	Mackinaw **	Bliss (NY163) ***
Dundee **	MSDD247-07 **	Lamoka **
MSDD247-11 **		MSBB058-1 **
MSAFB635-15 **		NY174 **
MSW474-1 *		

* Tested in 1 year, at 1 field site, 3 replicate timepoints.
** Tested in 2 years at 4 site locations, 5 replicate timepoints.
*** Tested in 3 years at 5 site locations, 8 replicate timepoints.

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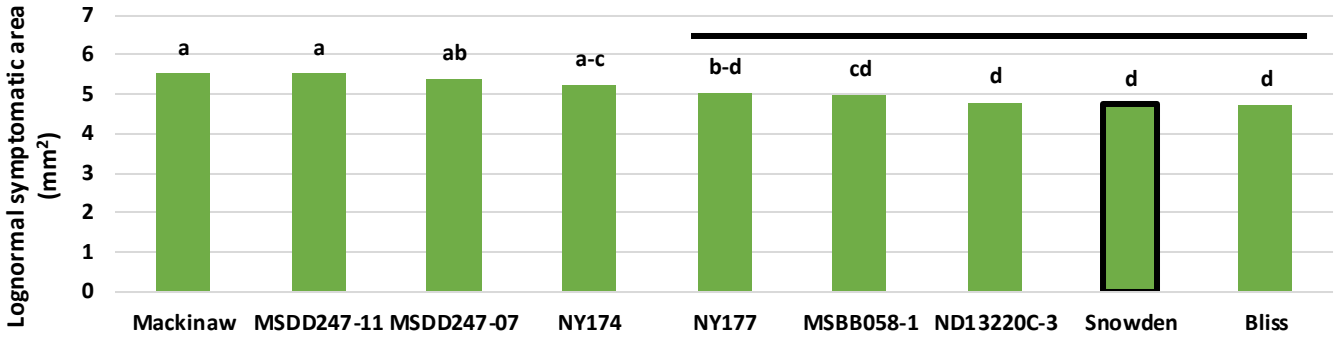
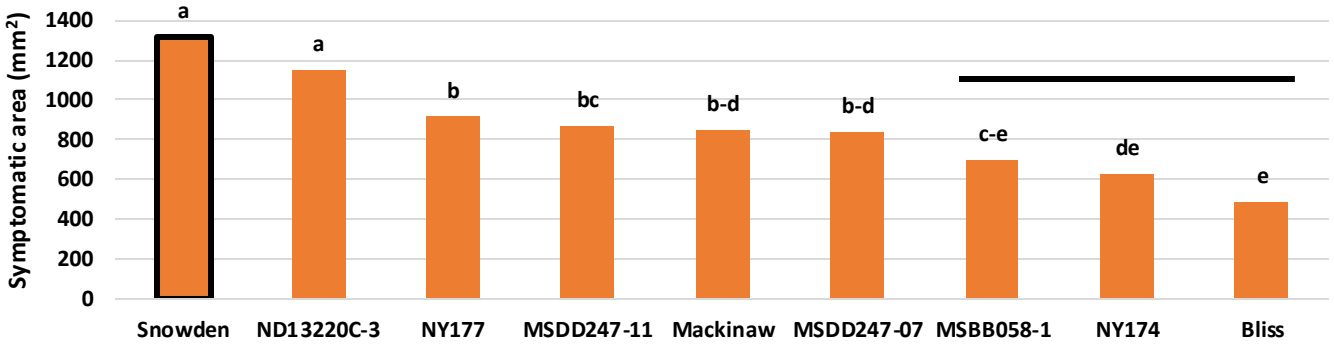
Cruz and Willbur

Range of infected area 184 - 558 mm²

Dry Rot- Chip Entry Responses - Across End (*P* < 0.0001)

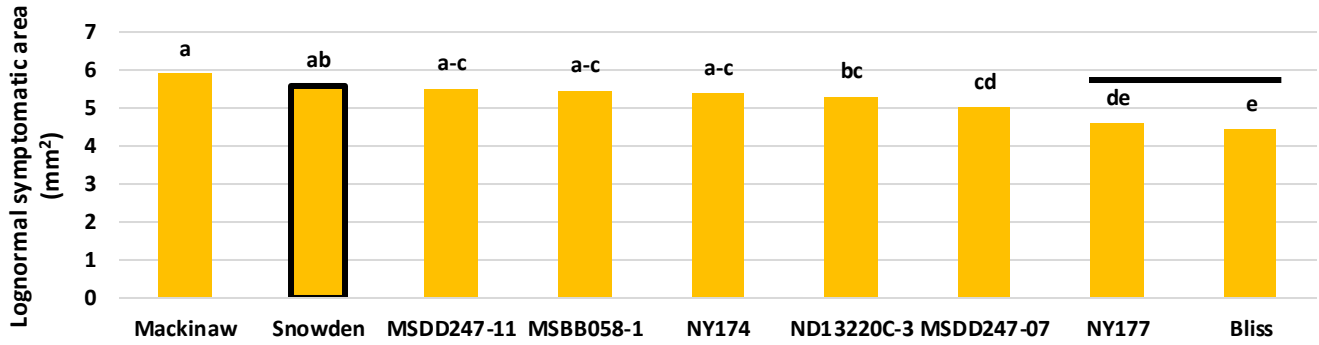


Pink Rot - Chip Entry Responses - Across End (*P* < 0.0001)



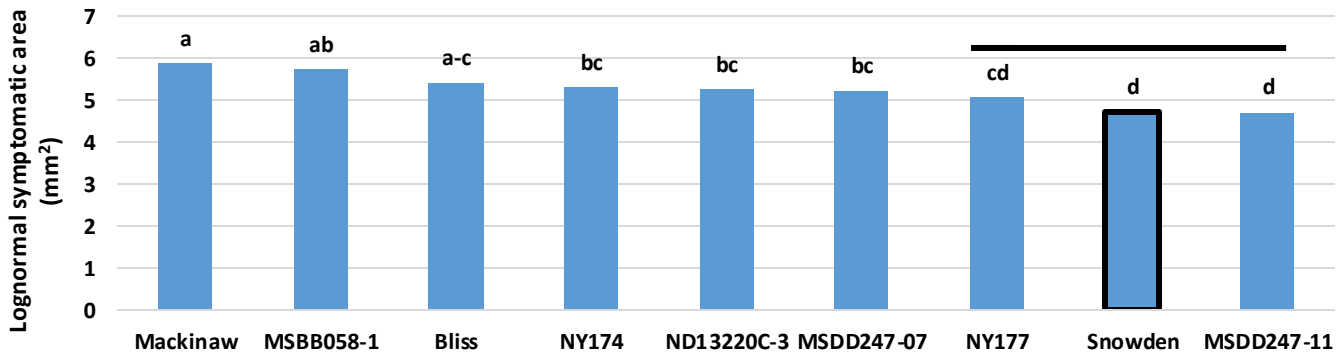
Range of infected area 209 - 697 mm²

Pythium Leak - Chip Entry Responses - Across End (*P* < 0.0001)



Range of infected area 179 - 619 mm²

Soft Rot- Chip Entry Responses - Across End (*P* < 0.0001)



*Bars with the same letter not significantly different based on Fisher's protected LSD (α=0.05).

**Means across apical and basal end responses in tubers from MSU Potato Outreach Program field locations (Montcalm Research Center) tested in three minimum replicate timepoints.

Dry Rot

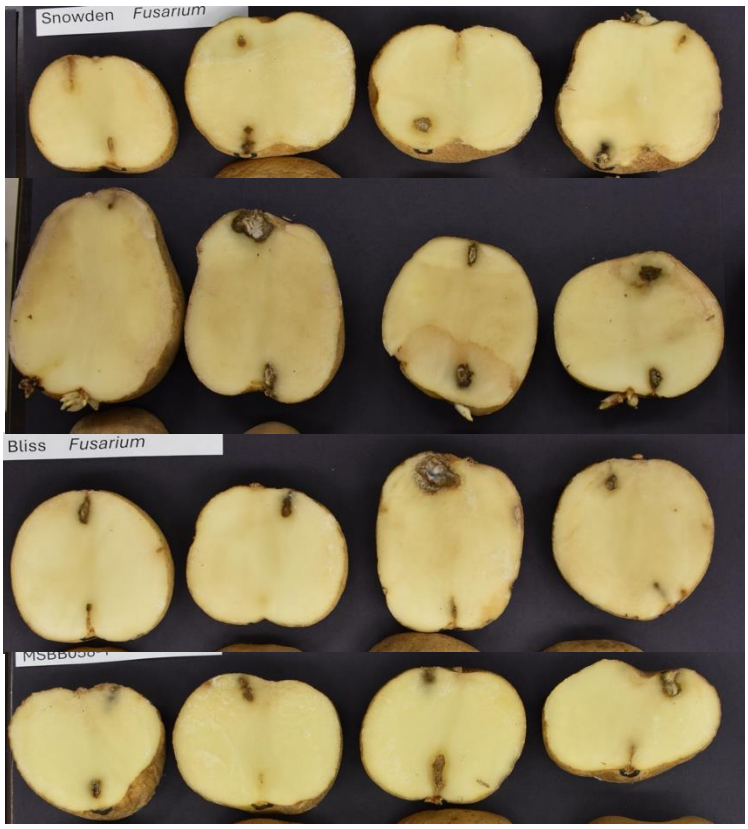
Pink Rot

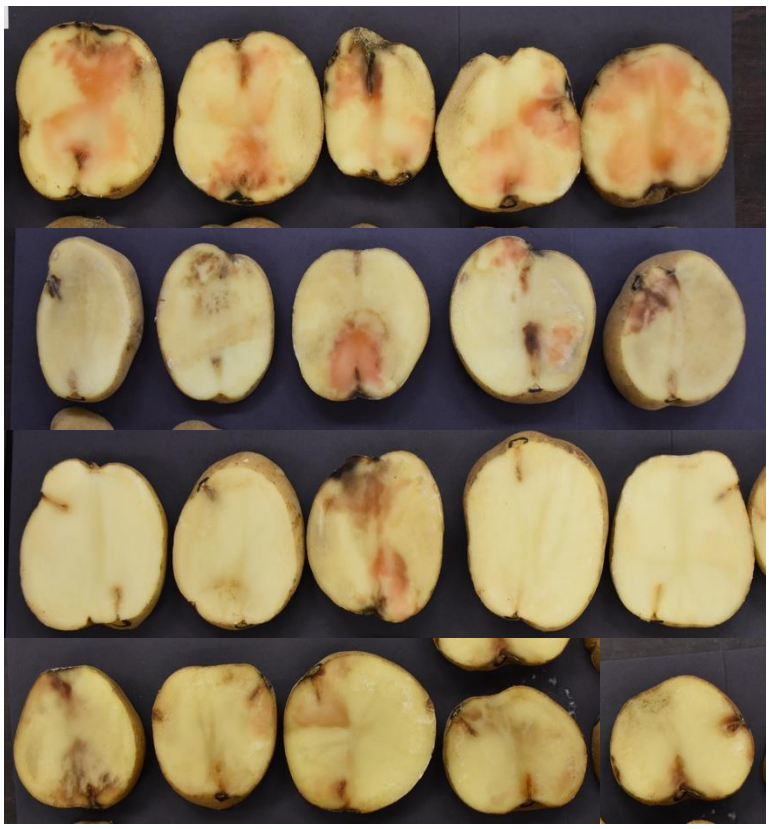
Snowden

Mackinaw

Bliss

MSBB058-1





Pythium leak

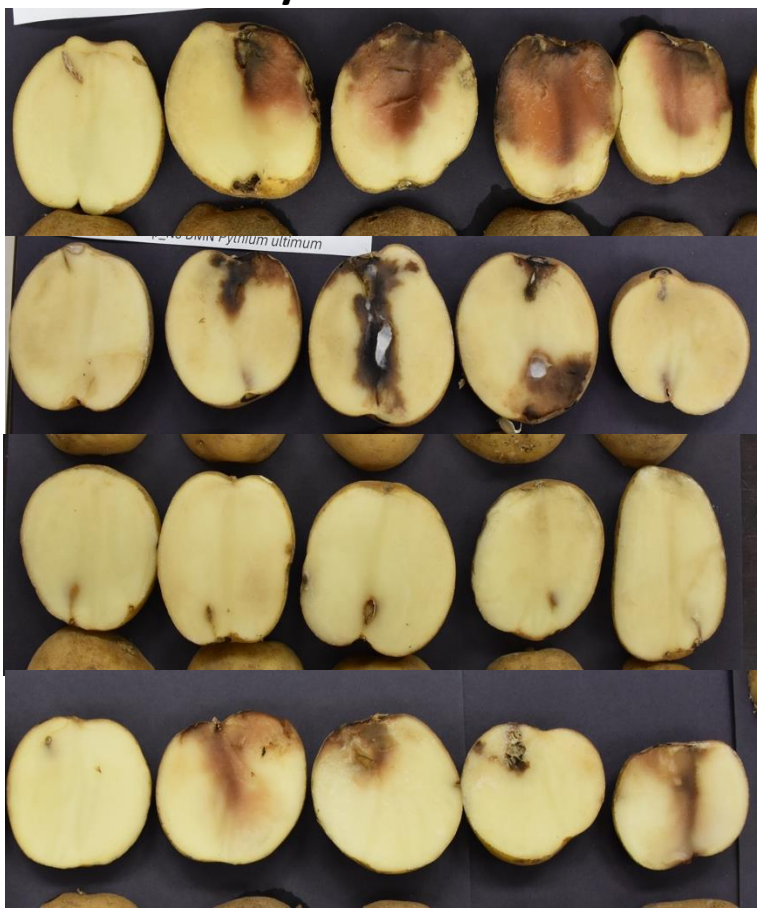
Soft Rot

Snowden

Mackinaw

Bliss

MSBB058-1



Many thanks to the MSU Potato Outreach Program cooperators for production and collection of tuber materials and to the Michigan Potato Industry Commission for advising and supporting this research.

2025 Potato Variety Postharvest Disease Responses

MSU Potato & Sugar Beet Pathology
Cruz and Willbur

Dry Rot - Chip Entry Responses - Across End (*P* < 0.0001)

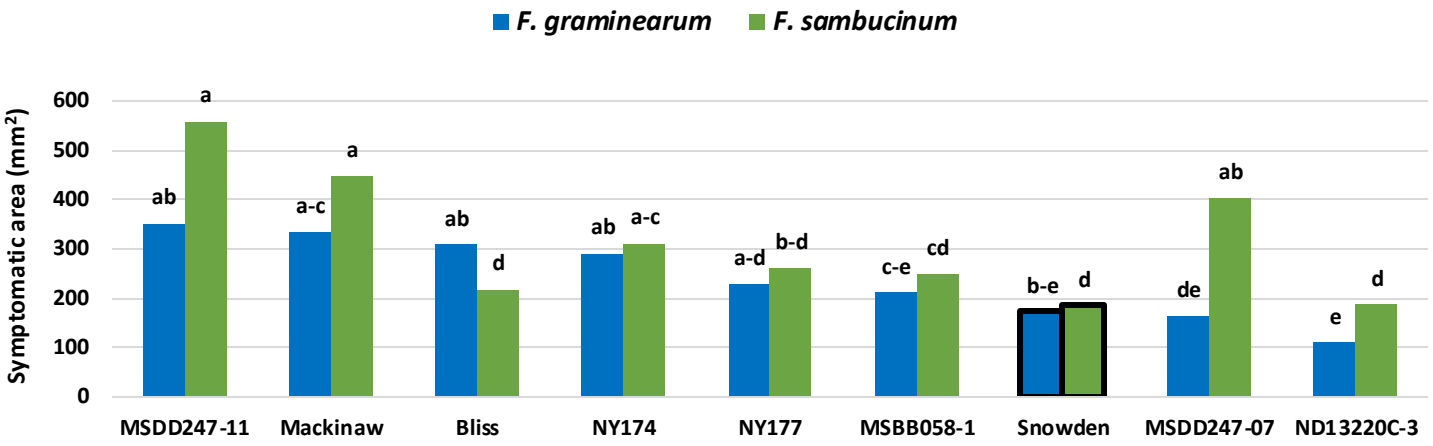
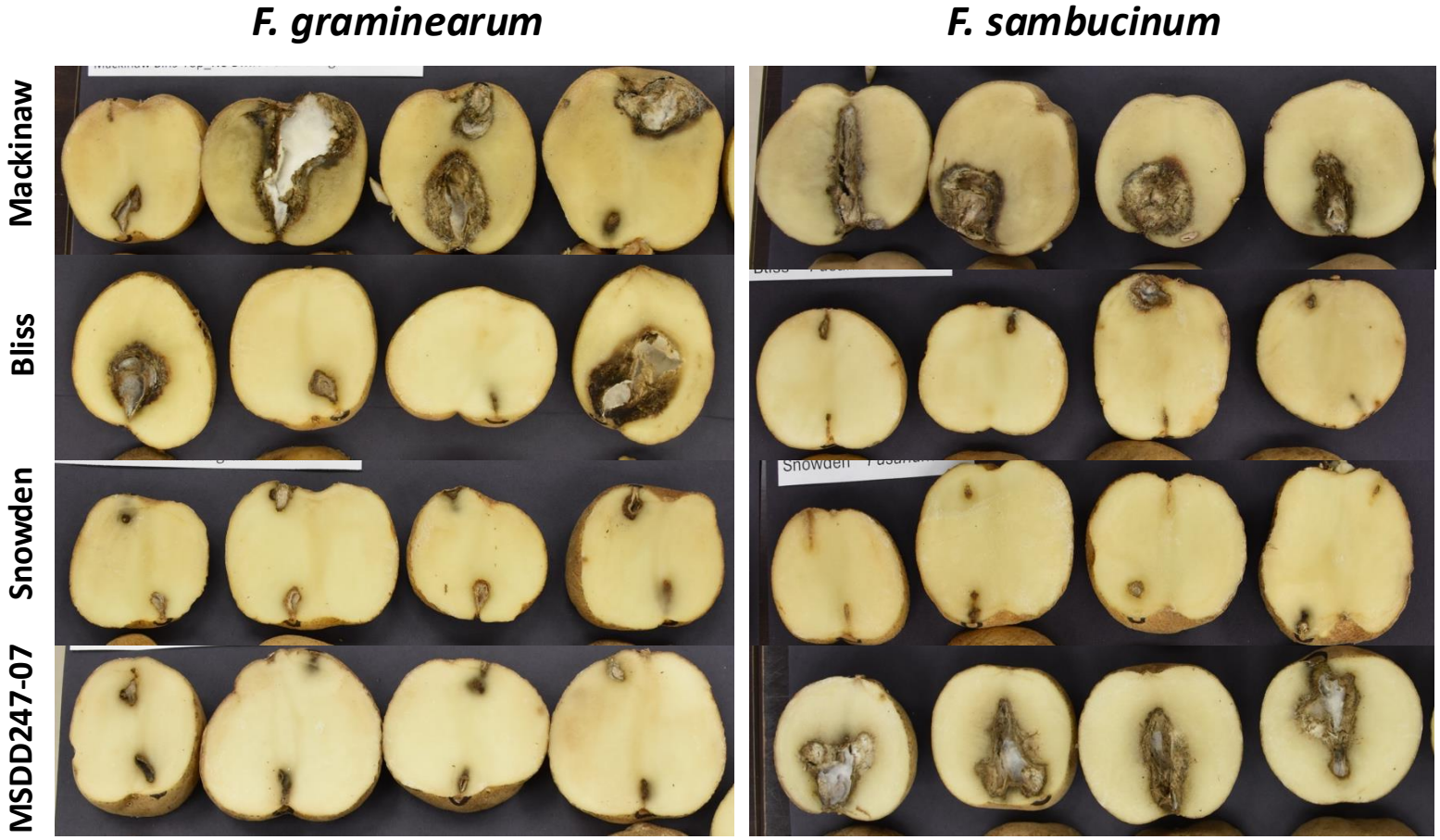


Figure 1. Responses of 9 chipping potato lines to dry rot caused by two species of Fusarium prevalent in Michigan potato samples. *F. gramineram* (blue) and *F. sambucinum* (green).

*Bars with the same letter not significantly different based on Fisher's protected LSD (α=0.05).
**Means across apical and basal end responses in tubers from MSU Potato Outreach Program field locations (Montcalm Research Center) tested in four (*F. sambucinum*) and two (*F. graminearum*) replicate timepoints.



2025 Potato Variety Postharvest Disease Responses

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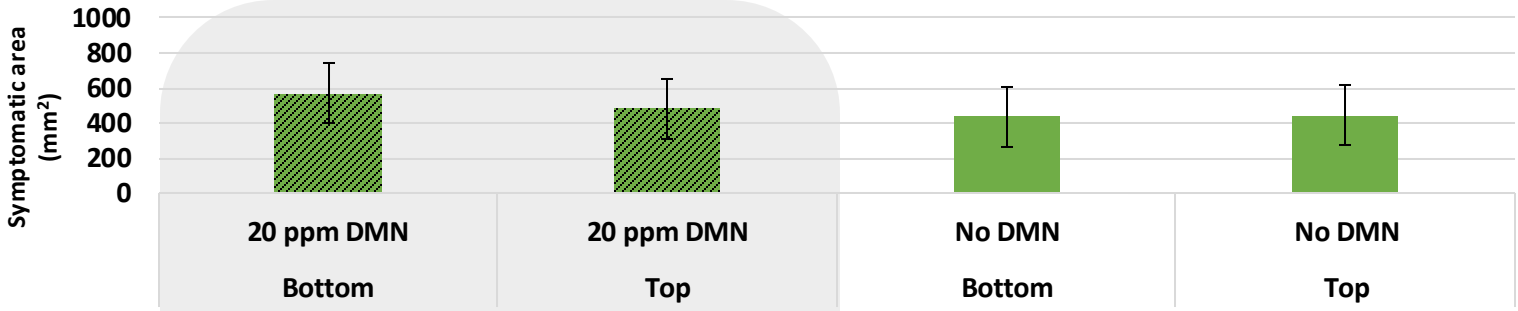
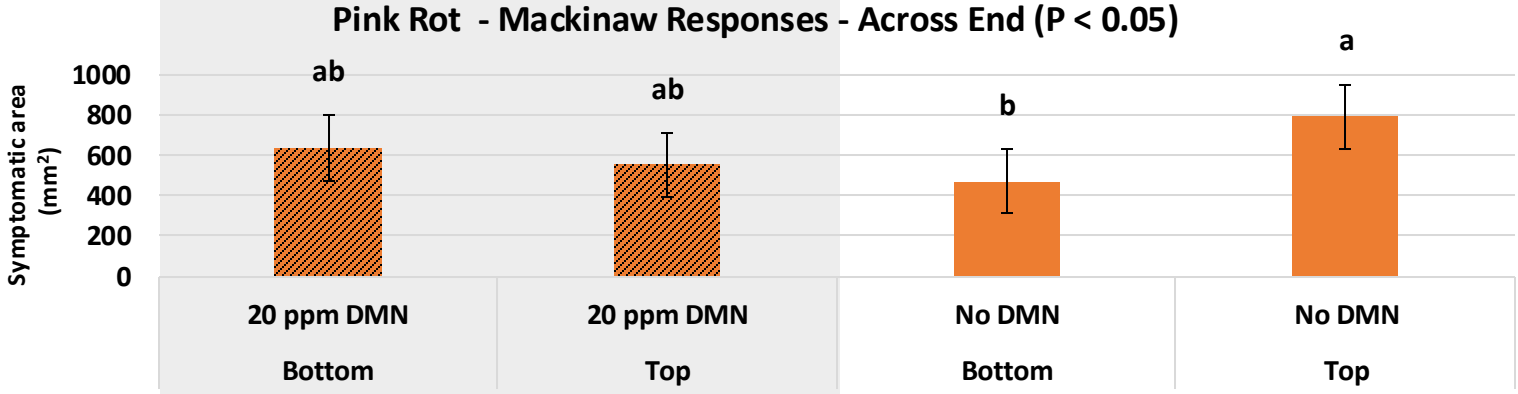
Cruz and Willbur

Dry rot - Mackinaw Responses - Across End (P > 0.05)

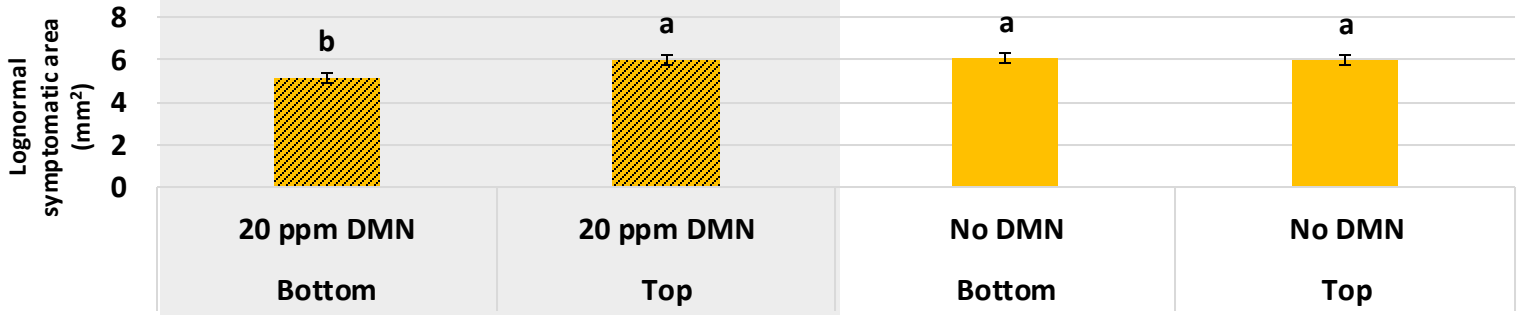


Pink Rot - Mackinaw Responses - Across End (P < 0.05)



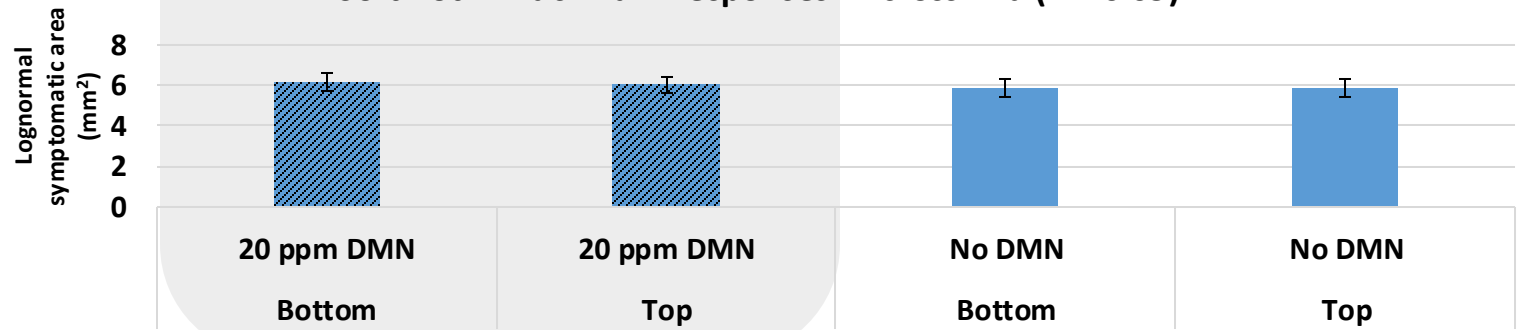
Range of infected area 374-613 mm²

Pythium Leak - Mackinaw Responses - Across End (P < 0.01)



Range of infected area 461-662 mm²

Soft Rot - Mackinaw Responses - Across End (P > 0.05)



*Bars with the same letter not significantly different based on Fisher's protected LSD (α=0.05).

**Means across apical and basal end responses in inoculated tubers. Potatoes were harvested from a MSU Potato Outreach Program field location (Main Farms) on 20 Sep 2024, stored in MPIC storage facilities, and treated with and without 0.03 fl oz/cwt (20 ppm) of 1,4-dimethylnaphthalene (DMN) (1,4Sight®) on 24 Sep 2024. Treated and non-treated tuber samples were collected from these bins and inoculated for disease testing in three minimum replicate timepoints.

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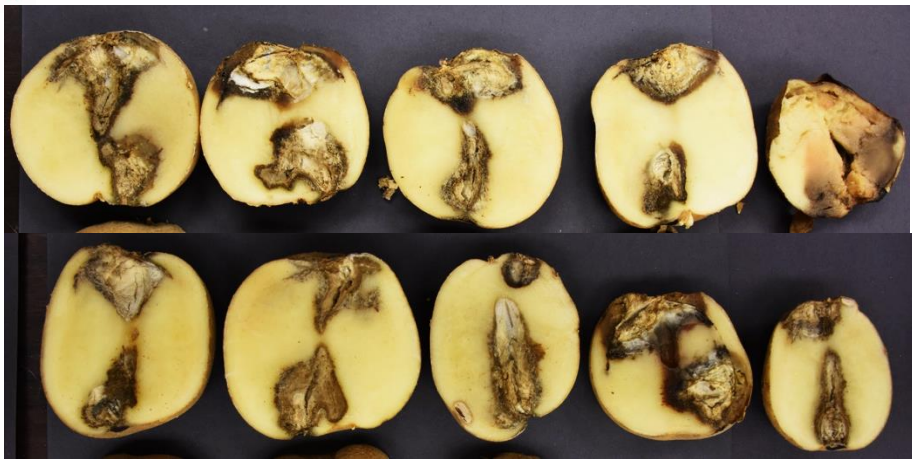
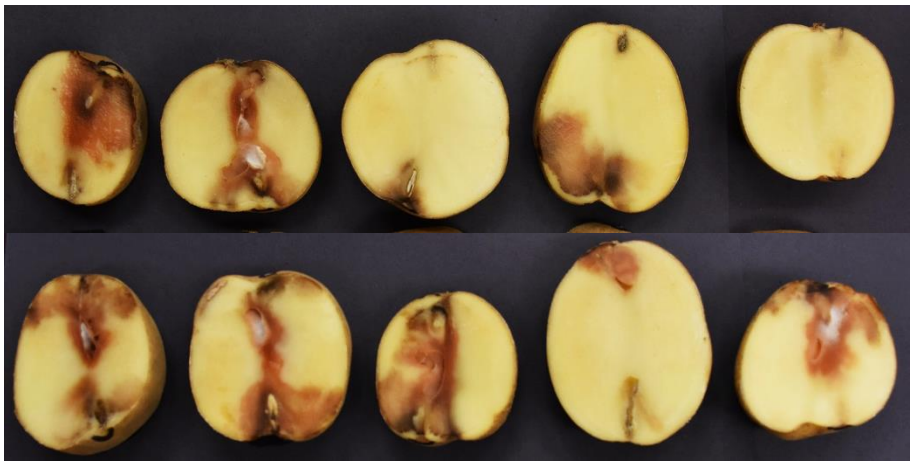
Dry Rot



20 ppm DMN

No DMN

Pythium leak



20 ppm DMN

No DMN

Pink Rot

20 ppm DMN

No DMN

Soft Rot

20 ppm DMN

No DMN