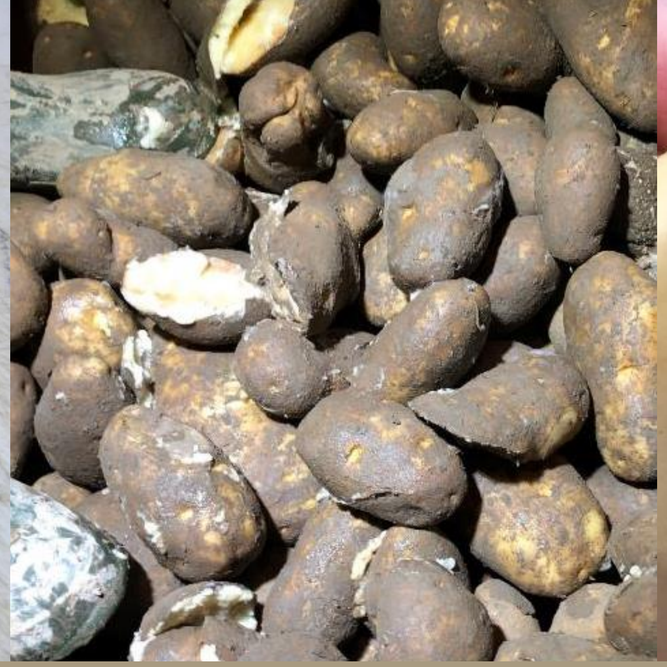


# Interactive storage disease diagnosis workshop

Jeff Miller and Nora Olsen

Miller Research

University of Idaho

# Can you name this disease?

# #1

#2

#3

#4

#5

#6

#7

#8

#9

#10

#11

#12

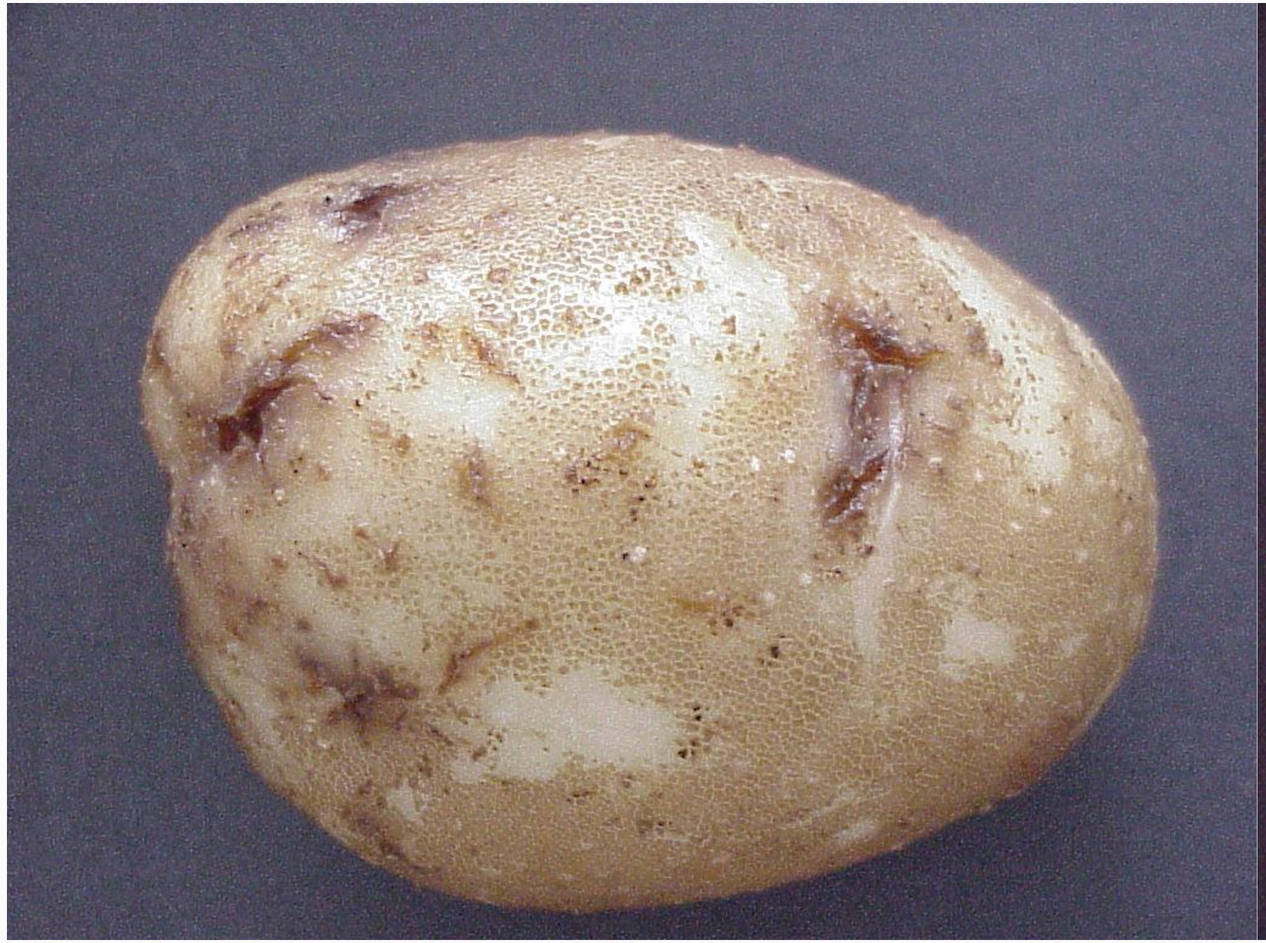
#13

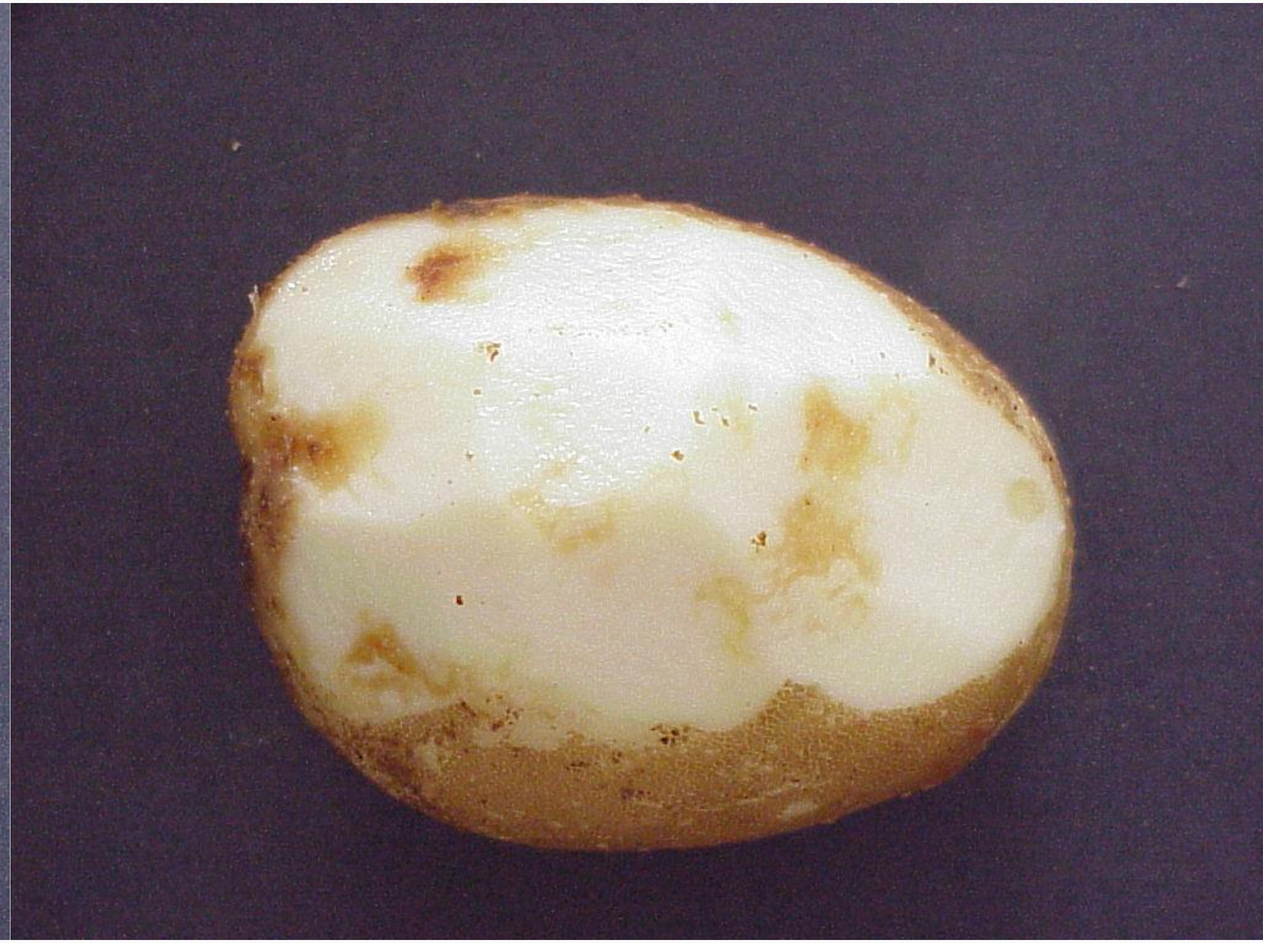
#14

#15

#16

#17

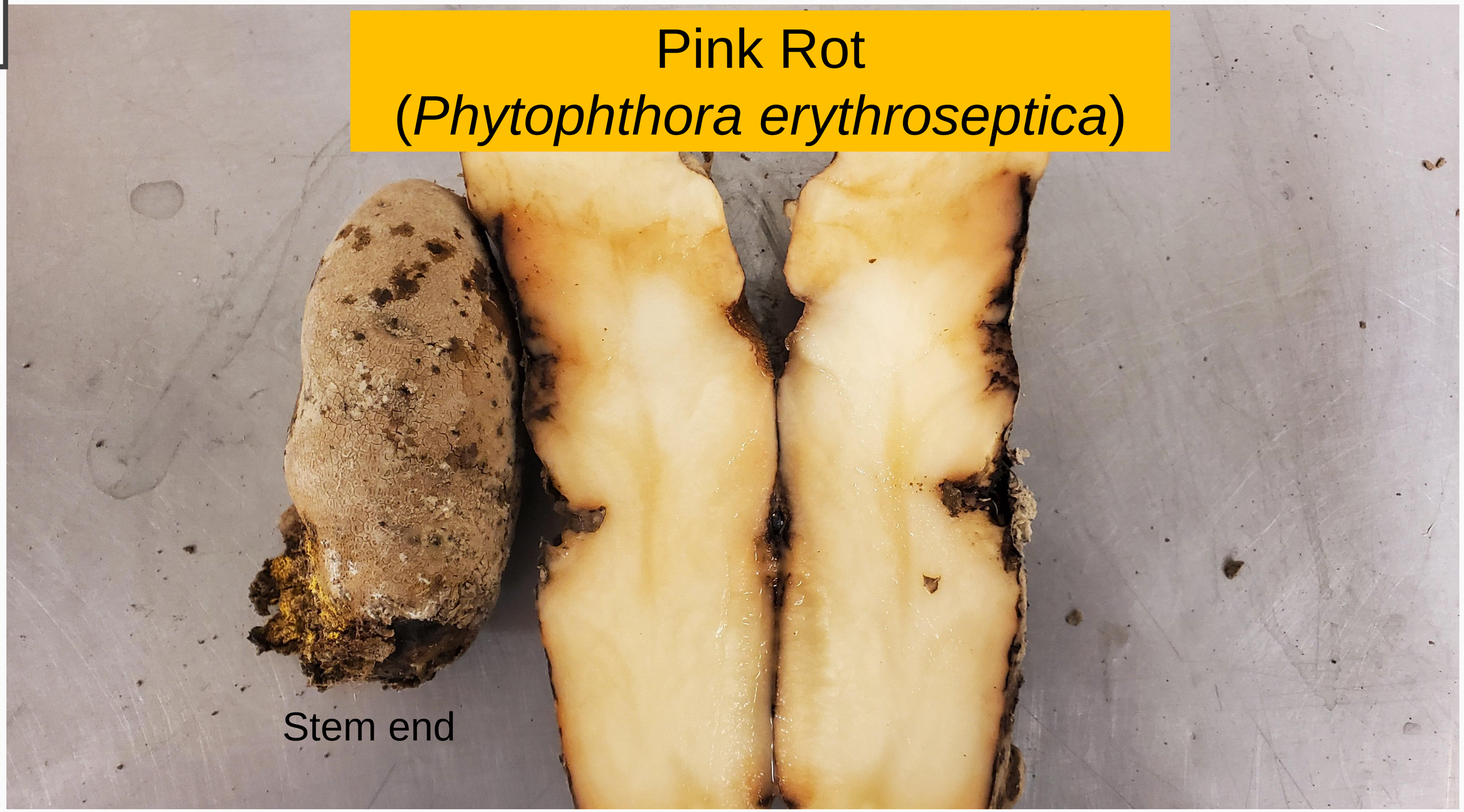




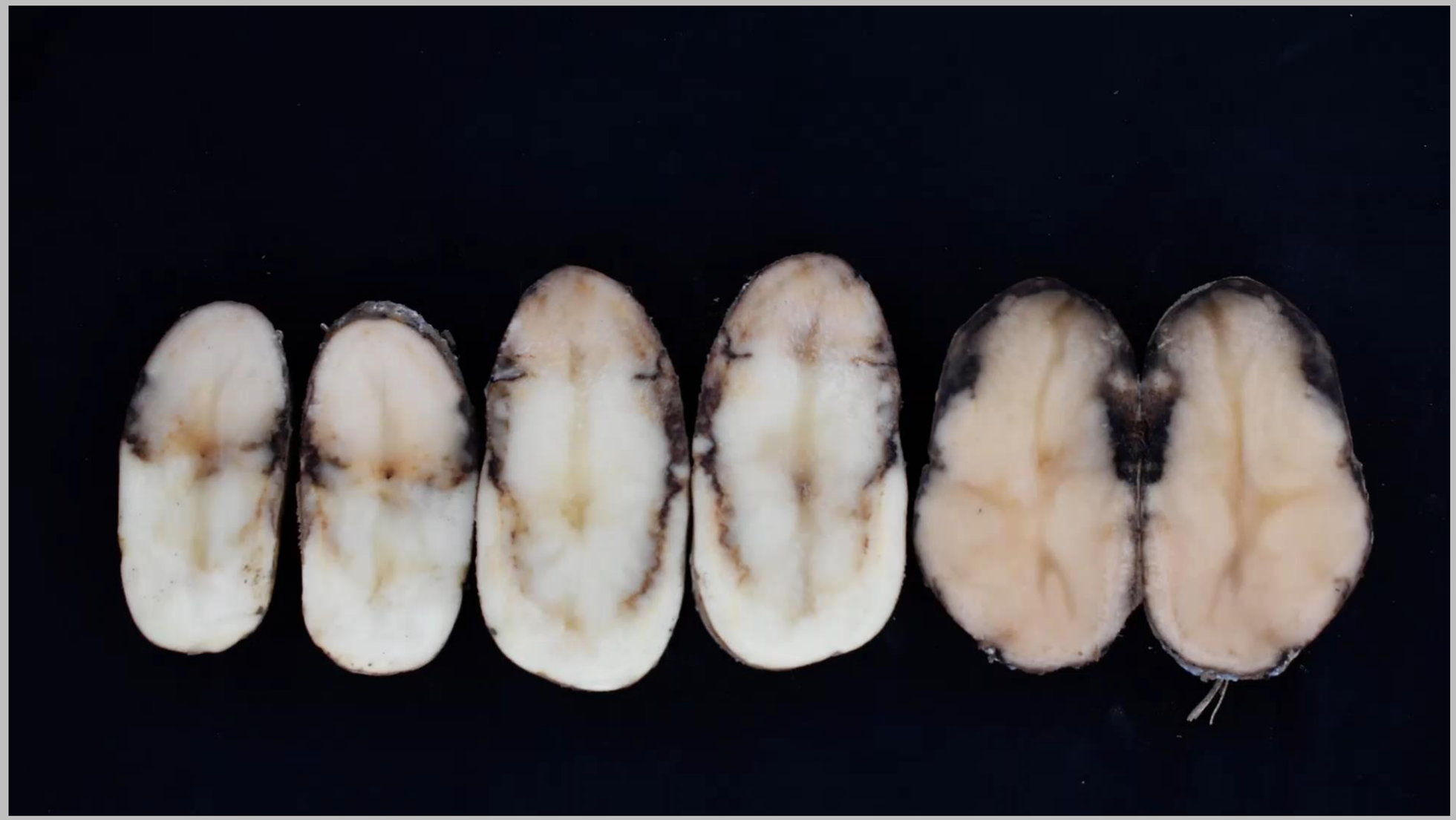
#18

#1

# Pink Rot
# (*Phytophthora erythroseptica*)



# PINK ROT TIMELAPSE

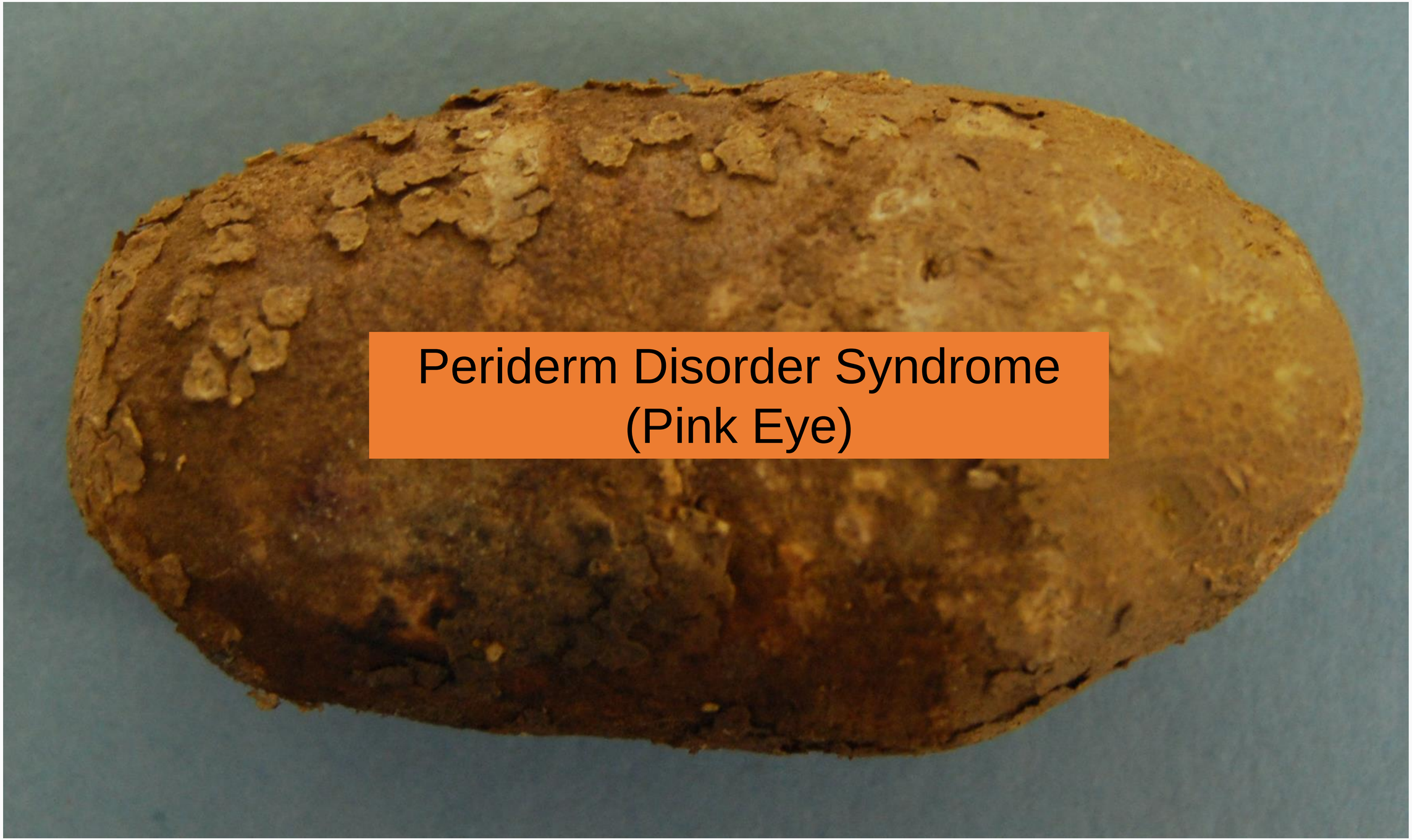


# Russet Burbank – Pink rot

#2

**White Mold**

#3



**Pink eye or now called Periderm Disorder Syndrome**

Clearwater Russet: Pink eye followed by dry rot

#4

#5

# Late Blight (*Phytophthora infestans*)

#6

# Powdery Scab (*Spongospora subterranea*)

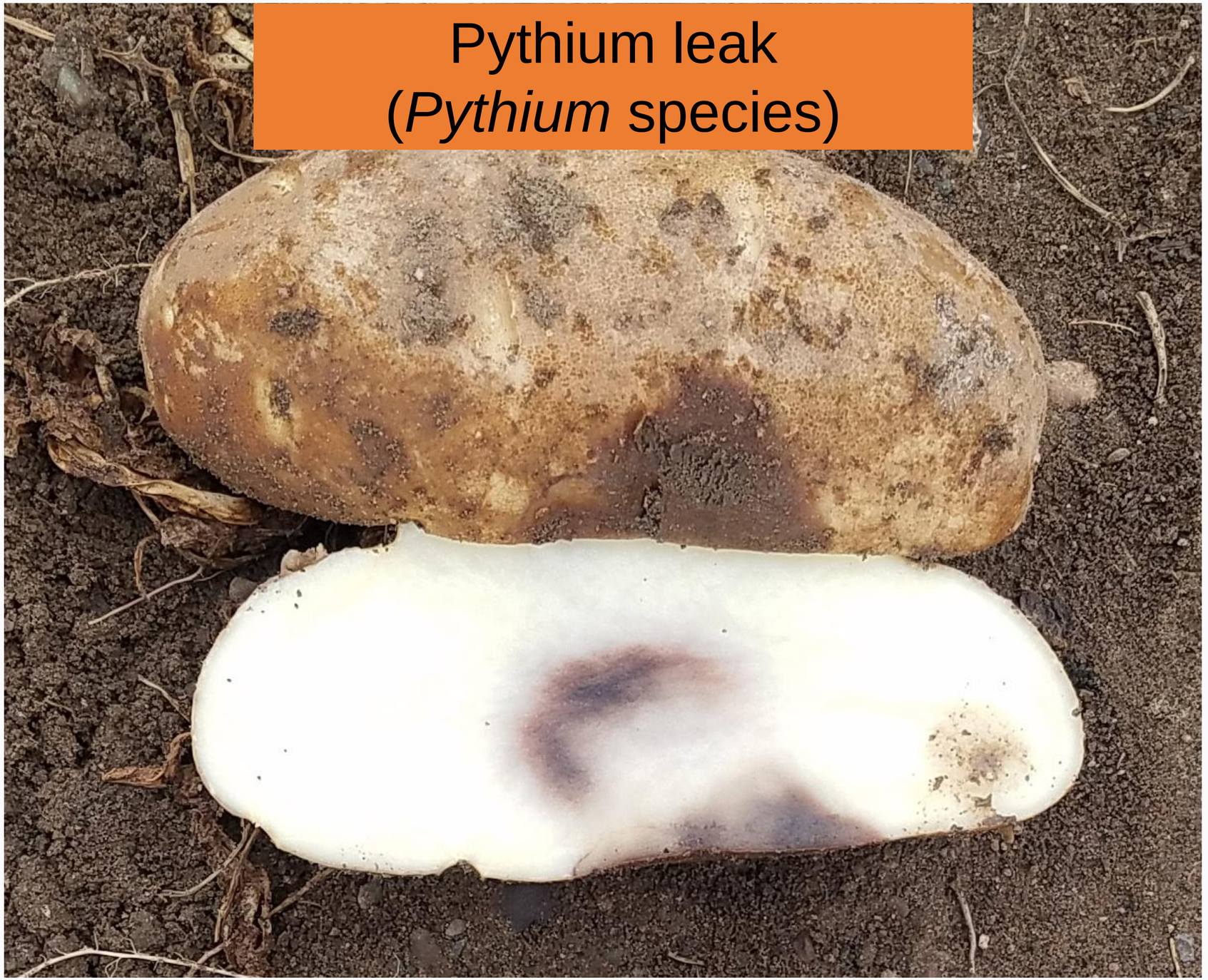
# Powdery Scab vs. Common Scab

Yellow variety – powdery scab

Yellow variety – powdery scab

#7

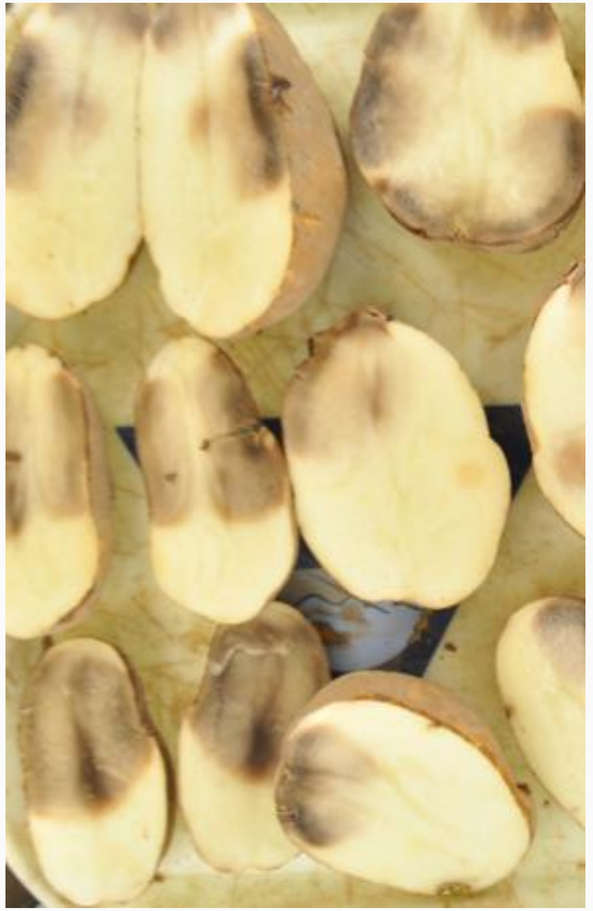
# Pythium leak
# (*Pythium* species)



Day 1

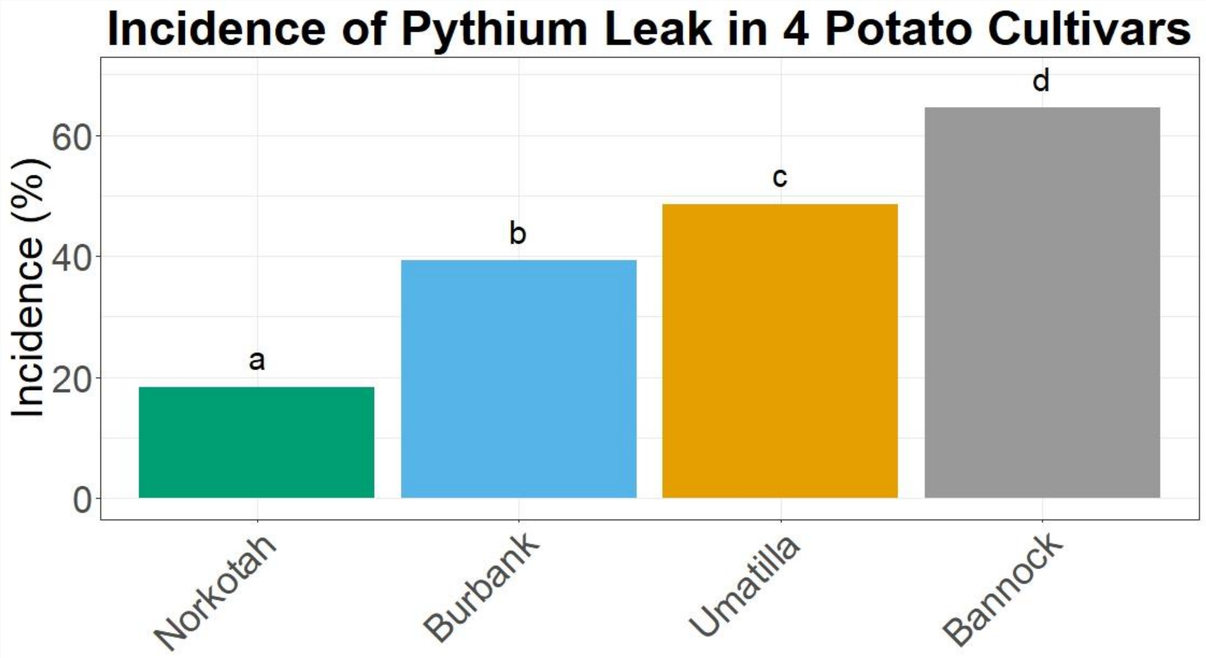
Day 2

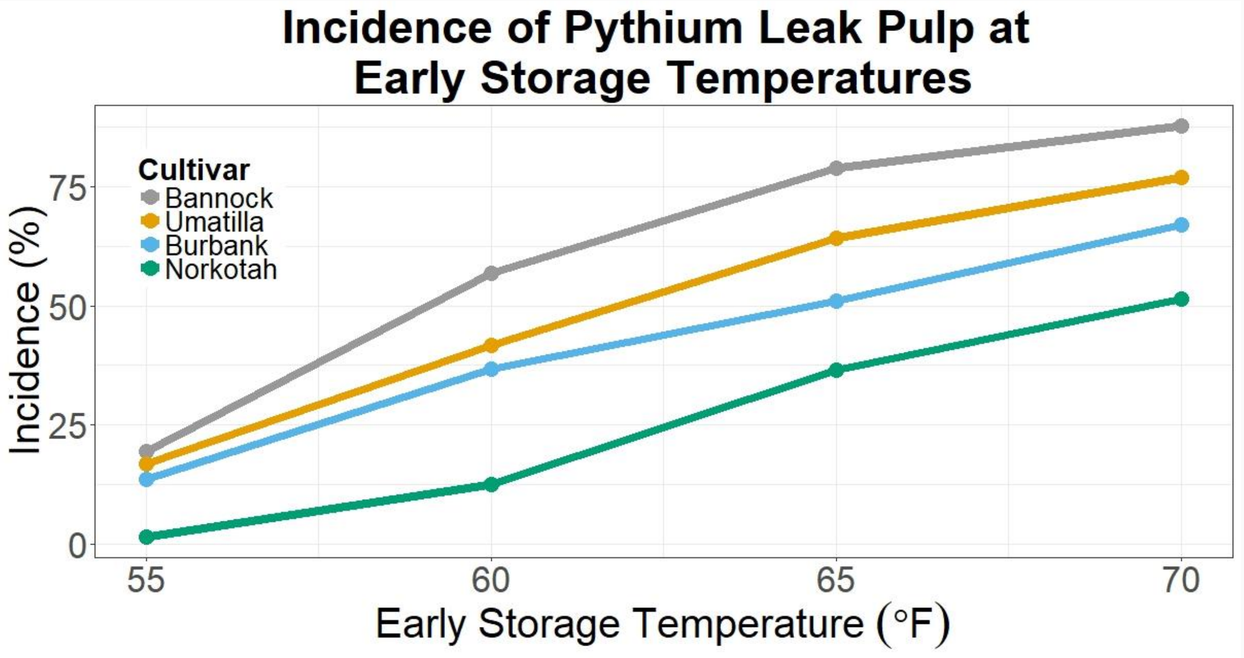
Day 3



Day 4

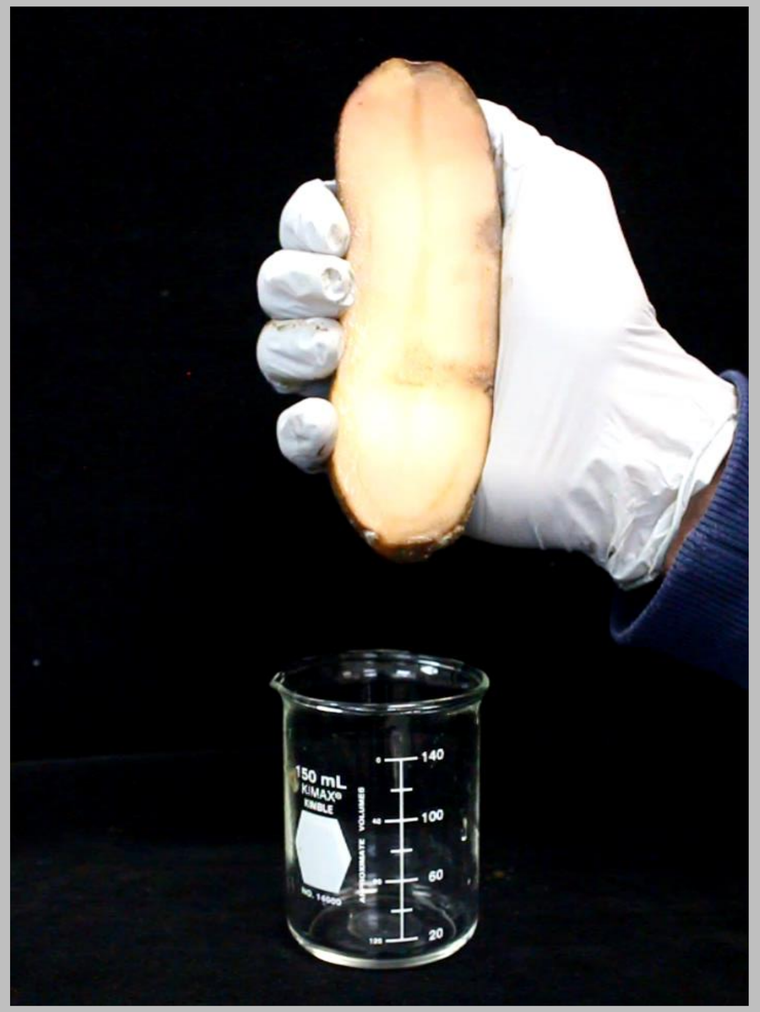
# Cultivar and storage temperature on leak



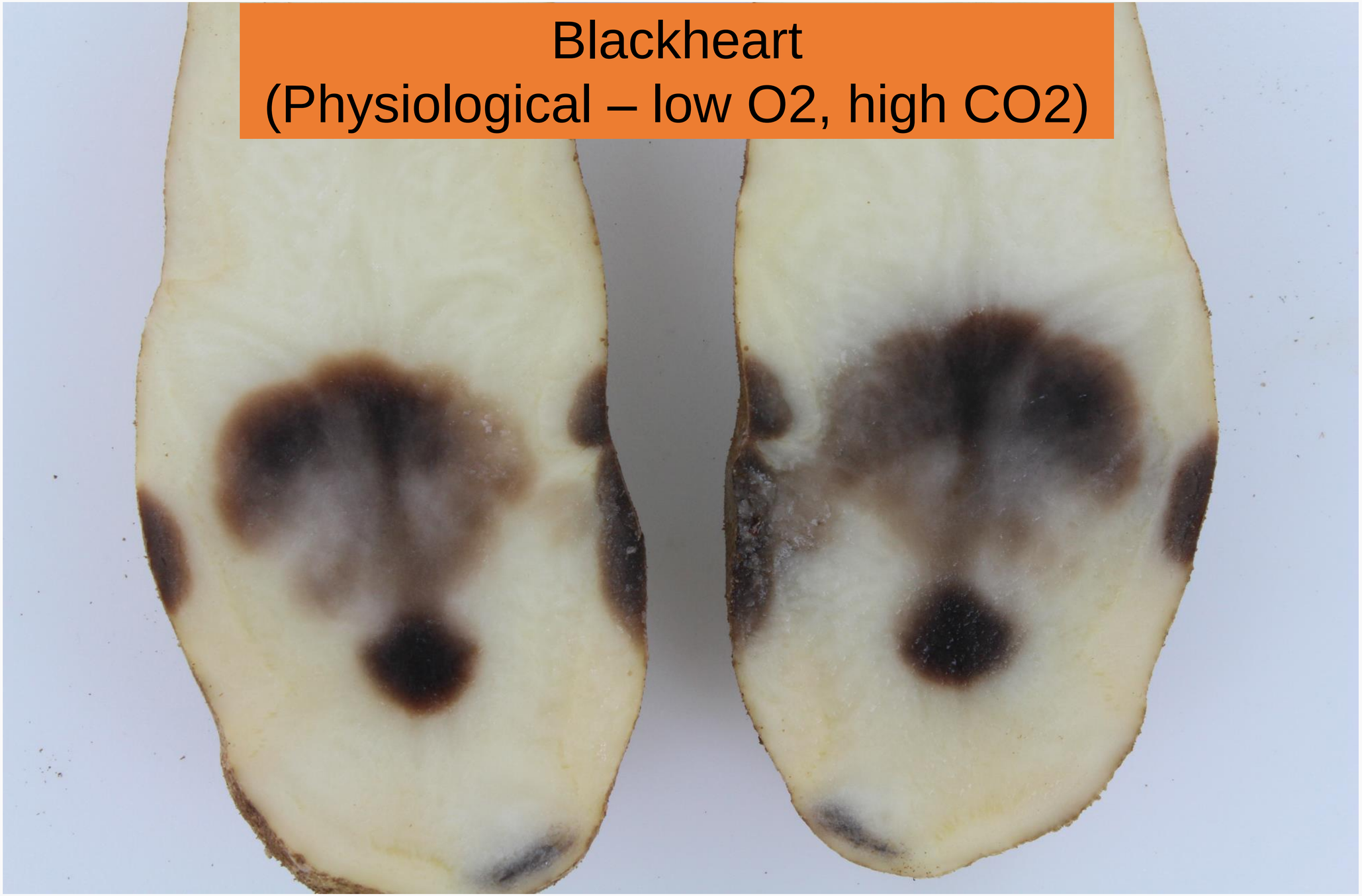

Values followed by the same letters are not significantly different ($\alpha<0.05$) for each graph.

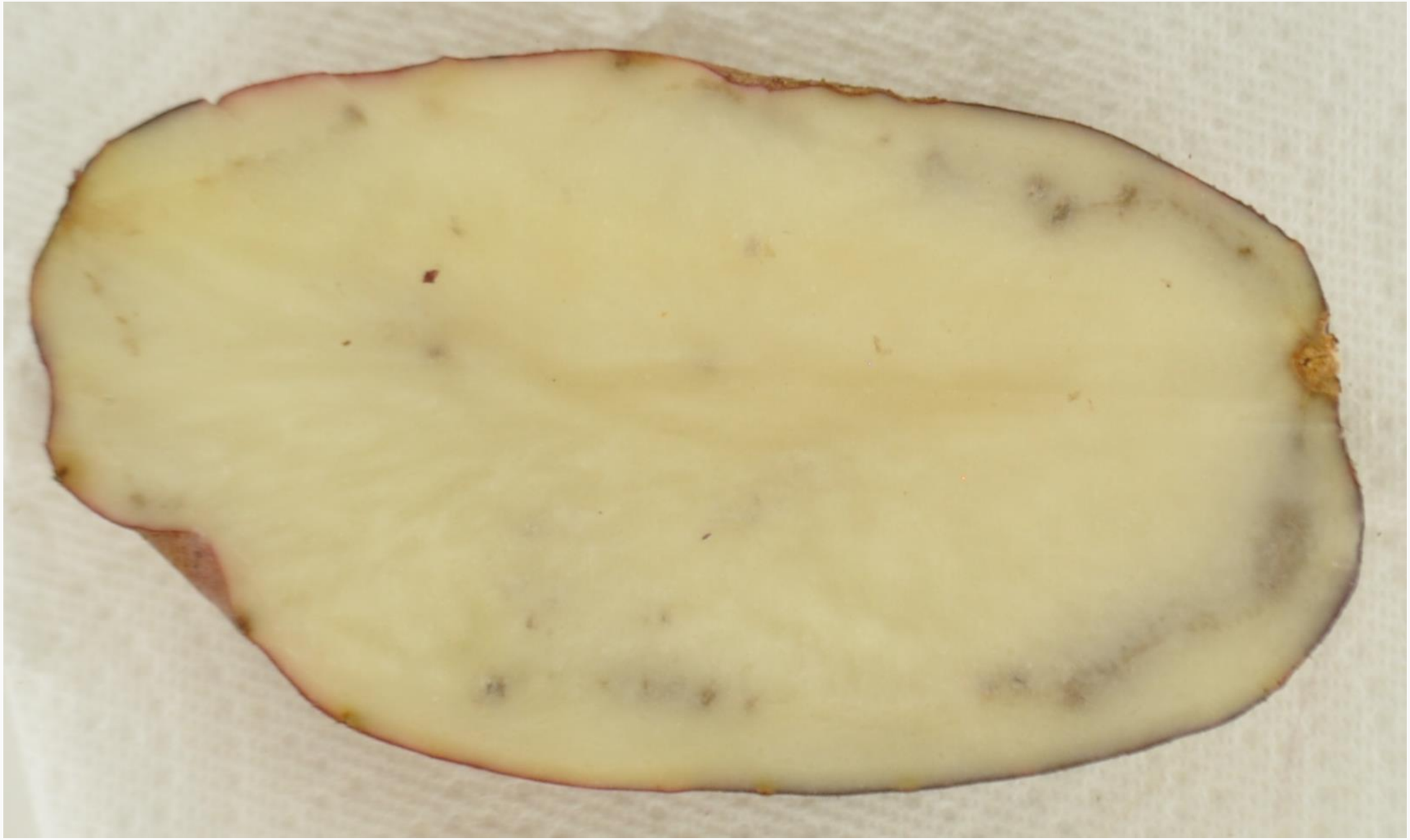
# PINK ROT VERSUS LEAK



#8

# Blackheart
# (Physiological – low O2, high CO2)





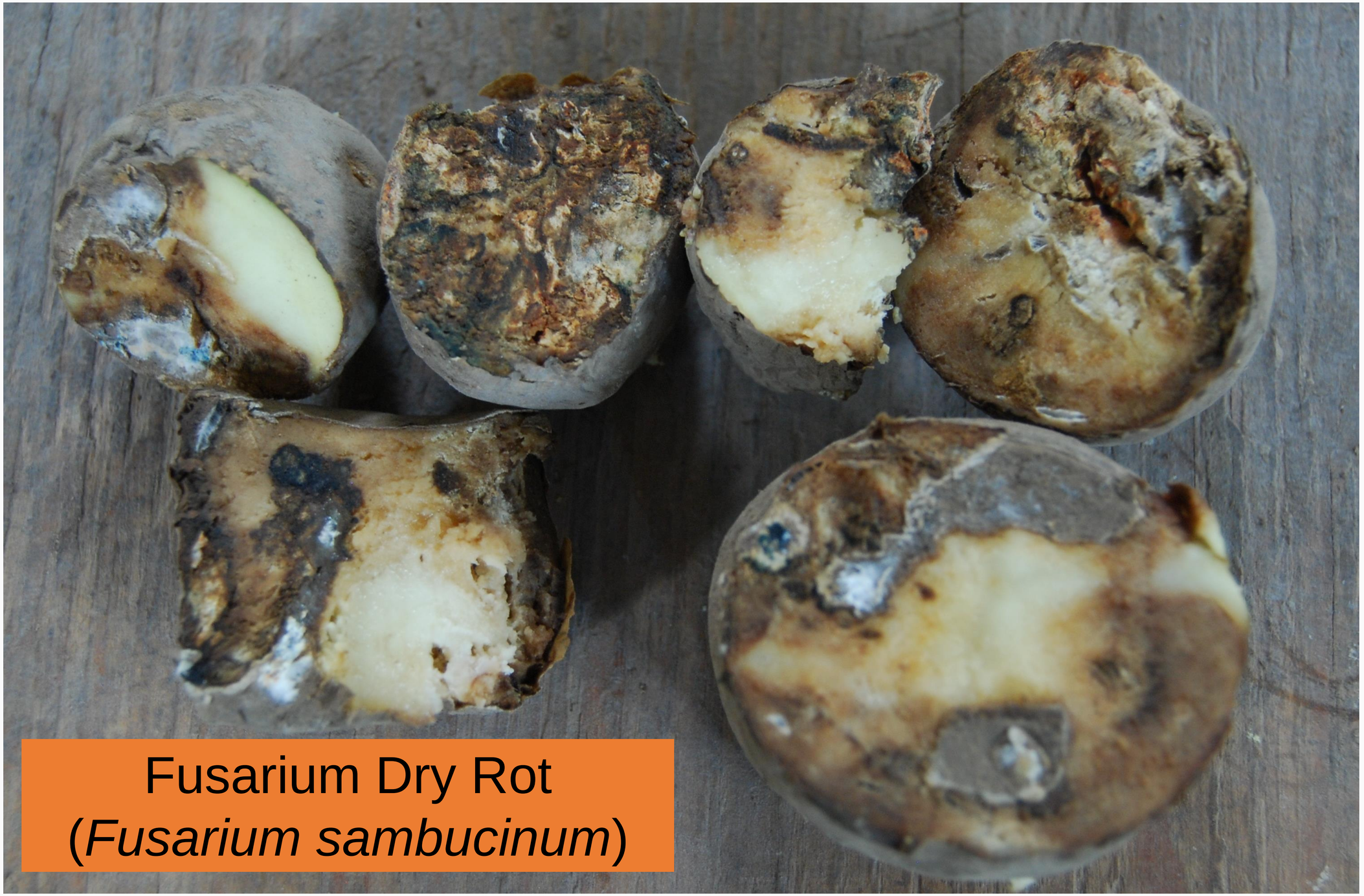
Chilling injury

#9

# Black Dot
(*Colletotrichum coccodes*)

**Ranger Russet – black dot – “Bumpy Ranger Syndrome”**

#10

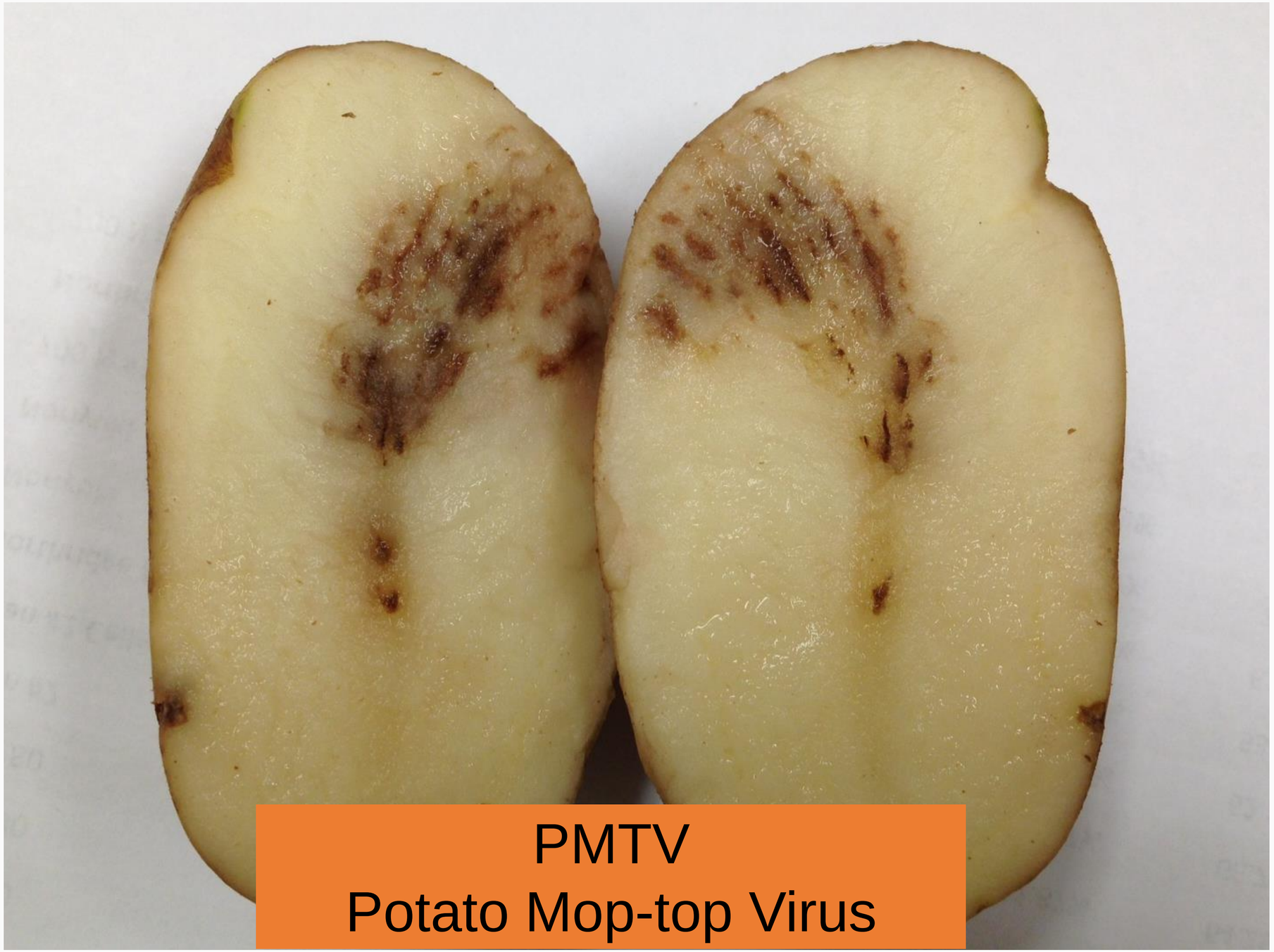


Fusarium Dry Rot
(*Fusarium sambucinum*)

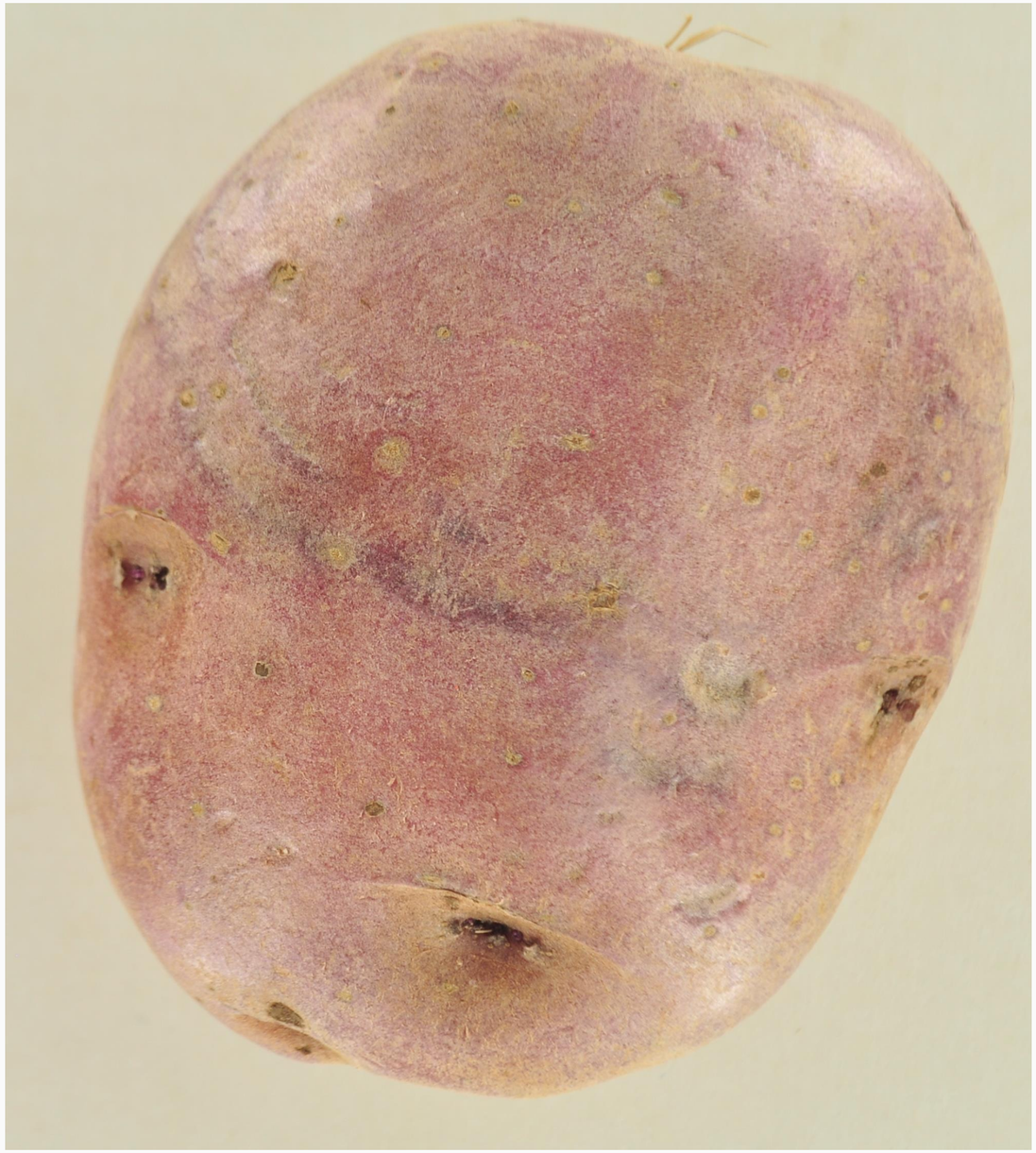
#11

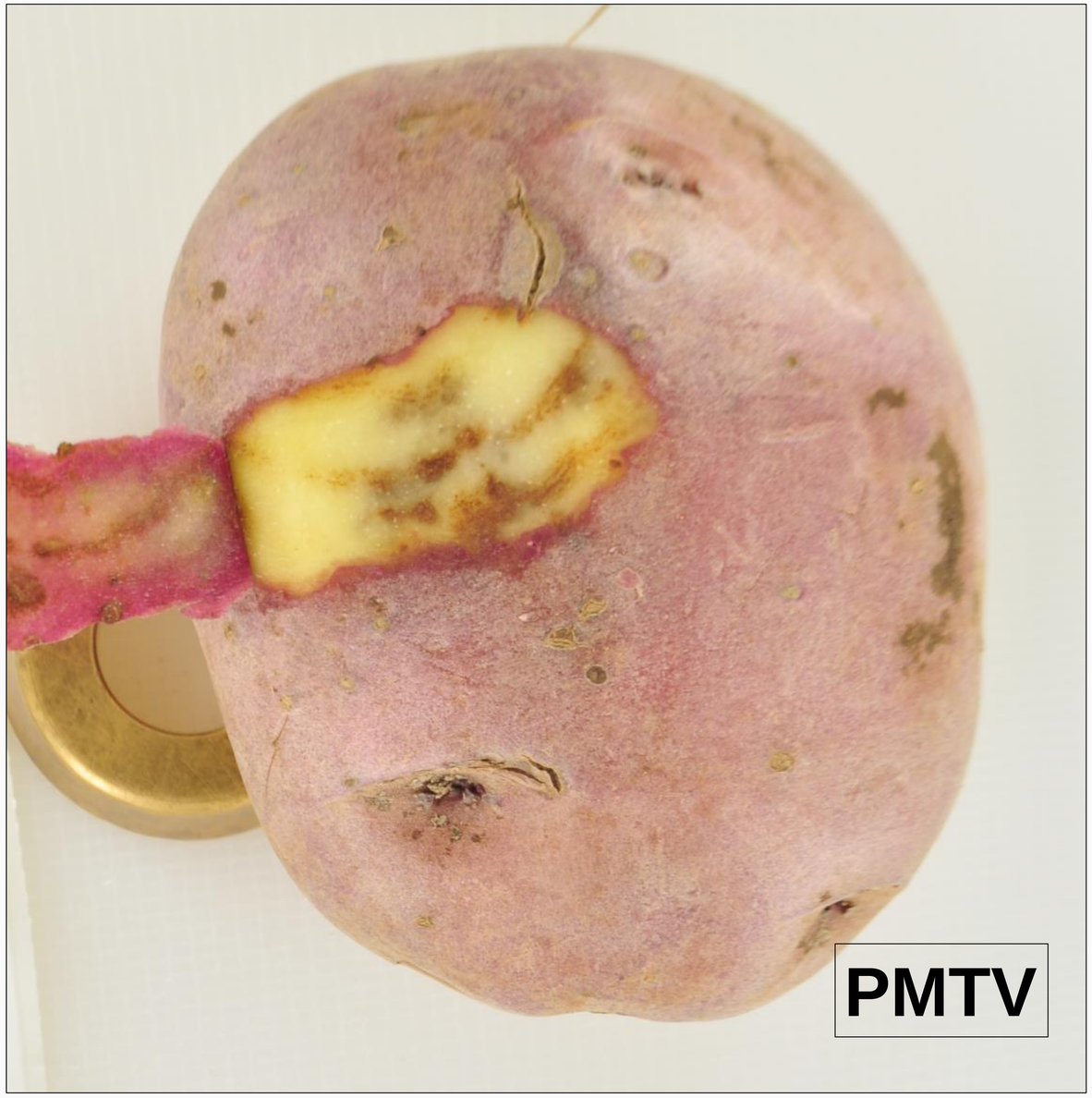
Early Blight/Brown Spot
(*Alternaria* species)

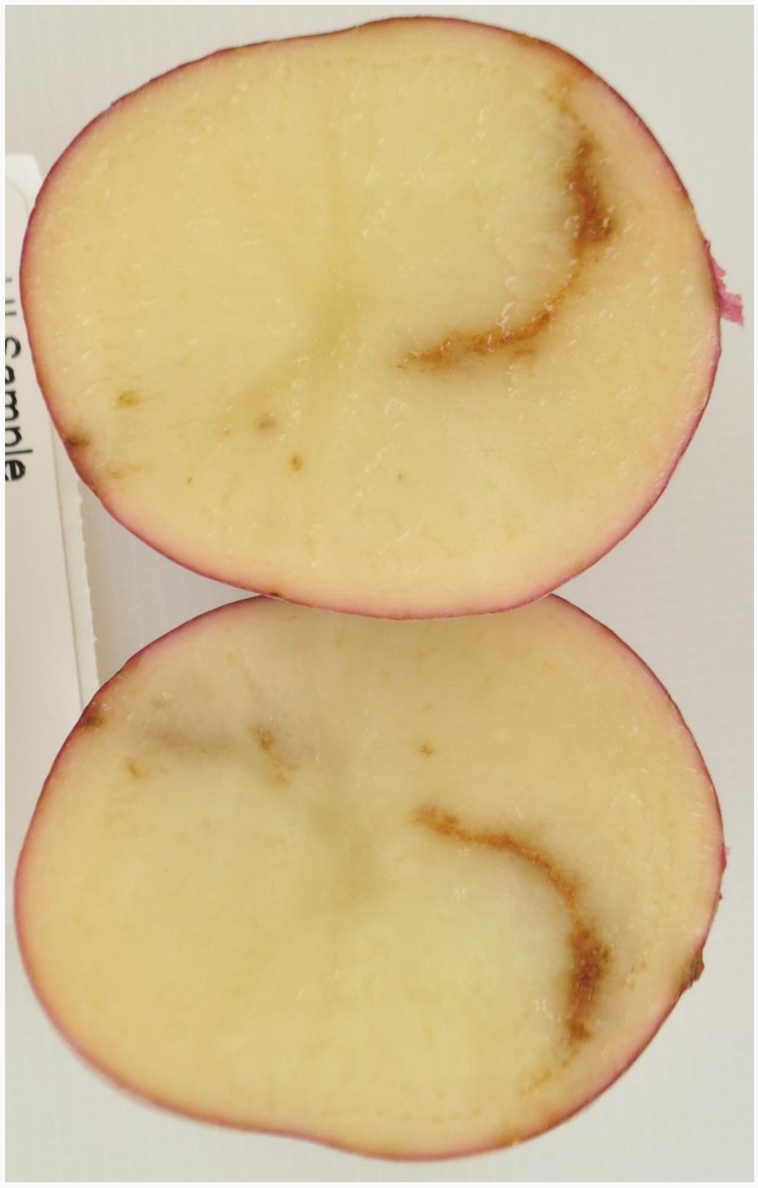
#12



PMTV
Potato Mop-top Virus




PMTV

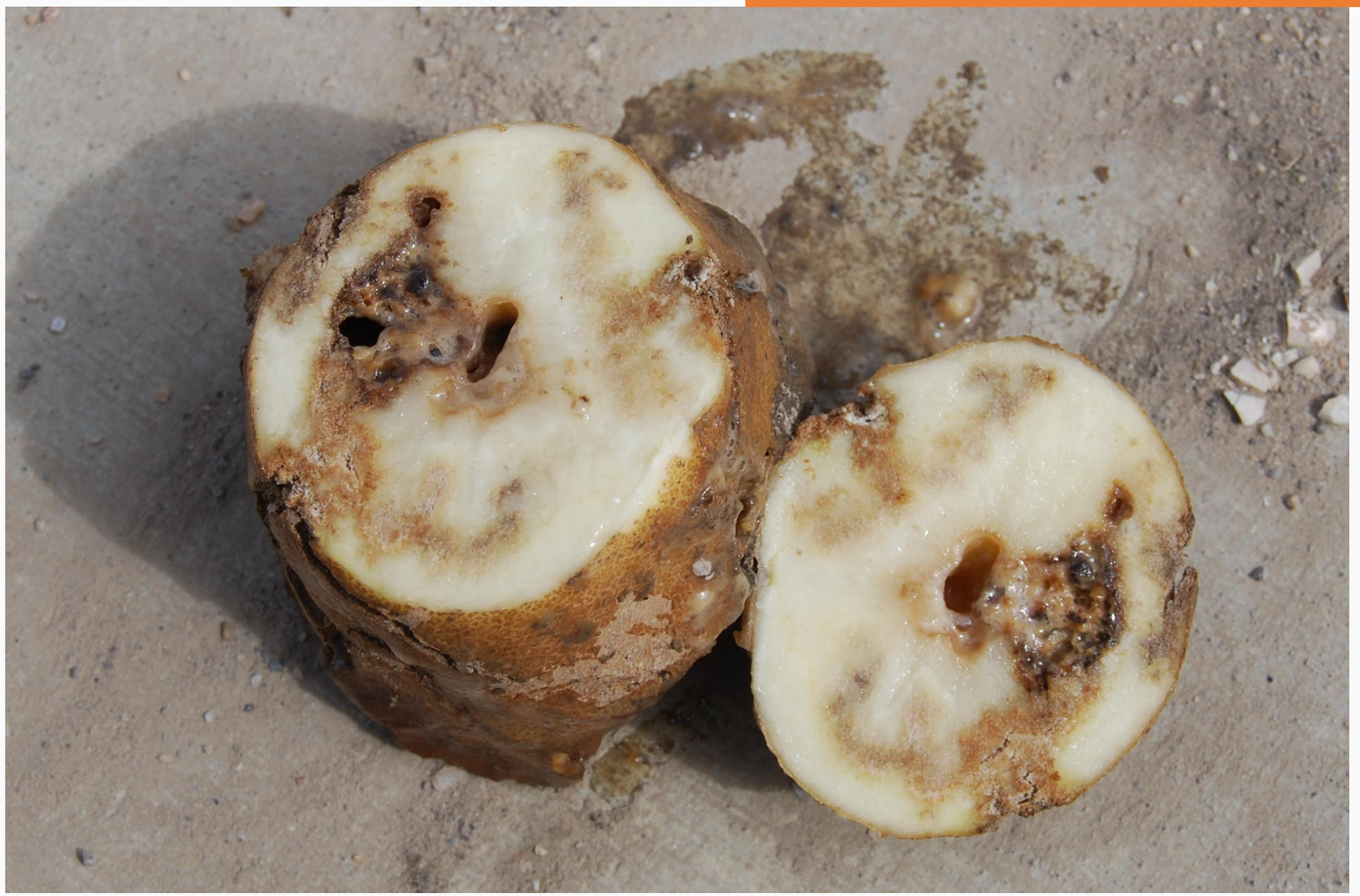


#13

Stem end discoloration
(*Verticillium dahliae*)

#14

# Bacterial Ring Rot (*Clavibacter sepedonicus*)

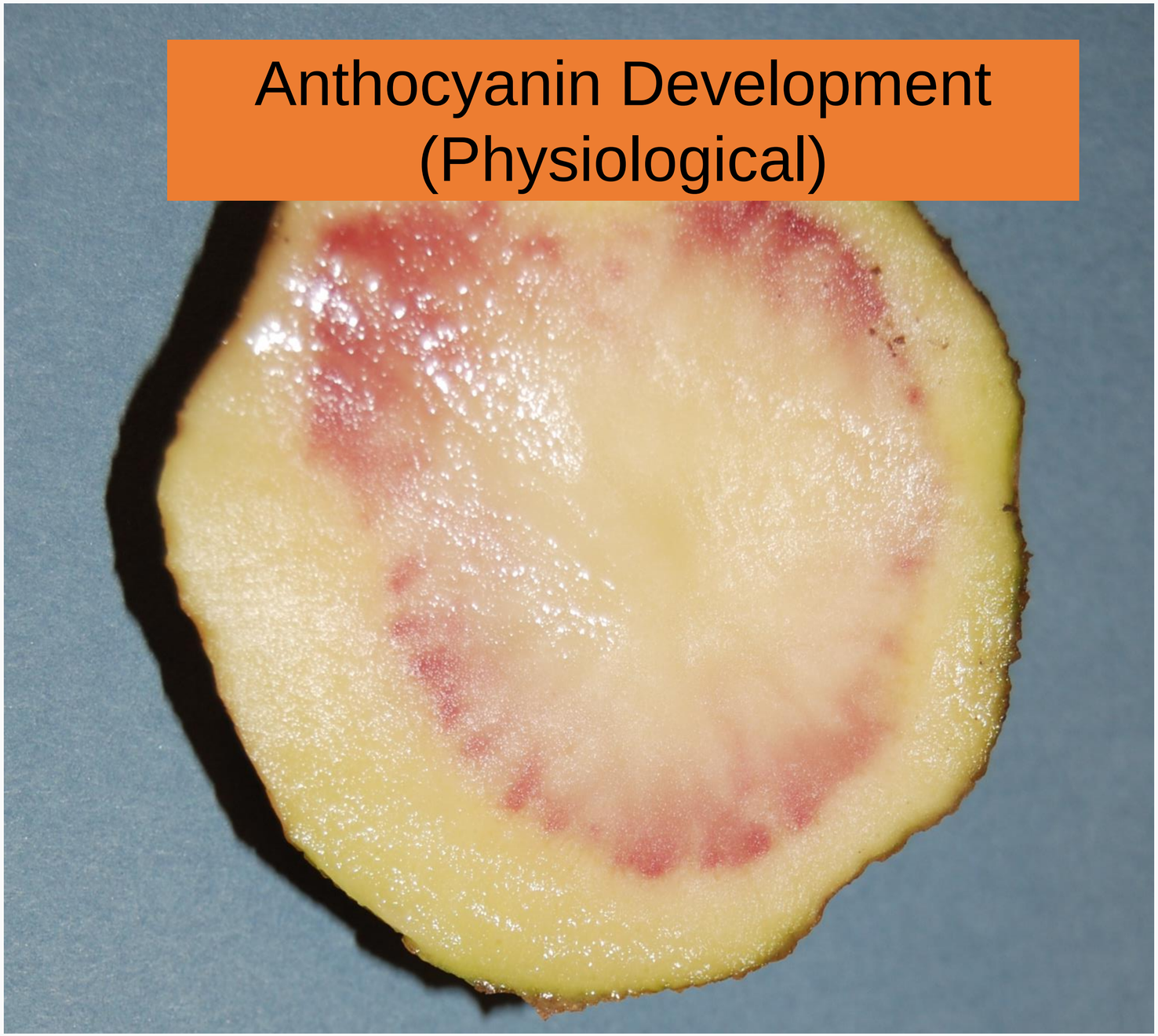


# Red variety -- BRR

**Ranger Russet NOT BRR**

**Alturas- YES BRR**

#15



#16

Zebra Chip
(*Candidatus* Liberibacter solanacearum)

Russet Norkotah – Zebra chip

# Zebra chip

Russet Norkotah – Zebra chip, PVY Nwi, PVS

**Russet Burbank– steamed peeled –
Zebra chip**

**Russet Burbank–
Zebra chip and pink rot**

#17

PVY
Potato Virus Y

# Russet Norkotah – PVY NTN and NWi

Alturas --PVY NWi

Alturas --PVY NWi

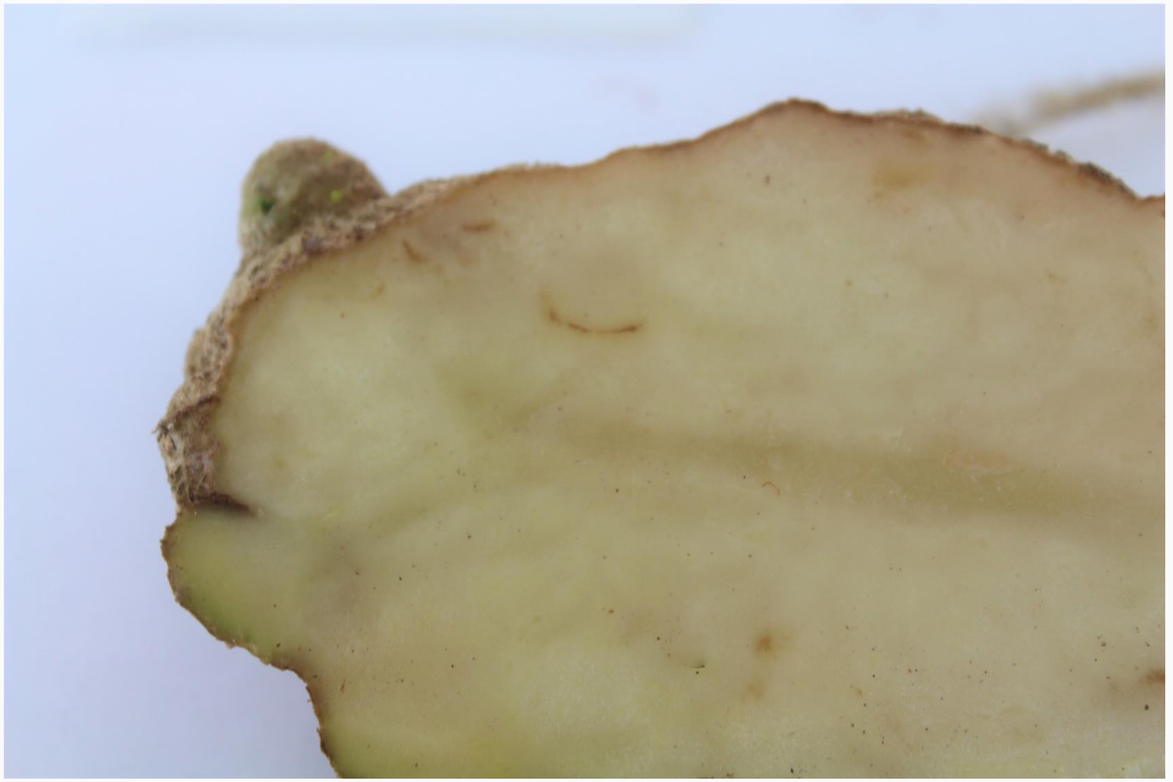
Ranger Russet --PVY NTN

Hey, I found this today... What is it?

Looks like PVY. Get us a sample so we can submit it for verification and strain

#18

TRV
(Tobacco rattle virus – corky ringspot)



**Ranger Russet – Tobacco Rattle Virus (TRV)**

Do some of the different viruses cause similar symptoms?

Can more than one virus be in a tuber at a time?

**Alturas**
**PMTV and**
**PVY NTN**

**Clearwater Russet -- PMTV, PVY N-Wi, PVS and PVX**

Clearwater Russet TRV, PVY NTN, PVS

Russet Norkotah TRV

HAIL
ND

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**2023**

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**107th ANNUAL MEETING**

**Delta Hotel by Marriott Charlottetown, Prince Edward Island, Canada**

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University of Idaho

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2. Line up the camera viewer on your phone with the QR code you want to scan and hold the phone steady until the app can read the code in front of it.
3. After a moment, a web link will appear on the phone screen, usually near the top.