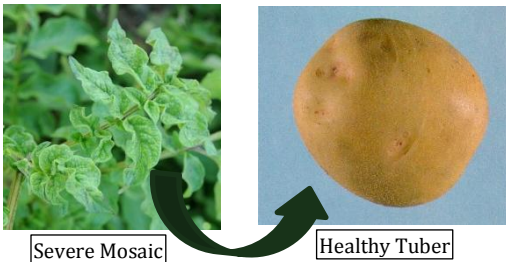


There are different types of PVY called "strains" and individuals or "isolates" in a strain, vary in biological properties.

There are 3 PVY strains in the USA

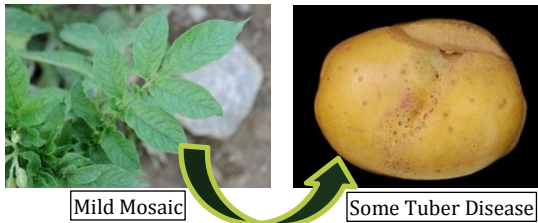
PVY⁰ the ordinary strain—

Severe mosaic on leaves. Few isolates cause tuber disease. Definitive lab tests. Easy to see and to manage through seed certification.



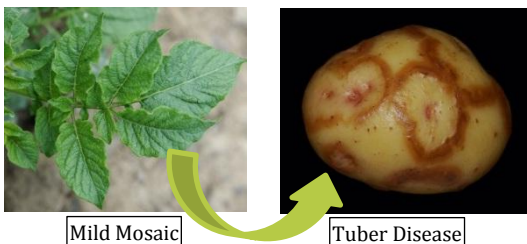
PVY^{NWi} the recombinant strain—

Mild mosaic on leaves. Some isolates cause tuber disease. Misleading lab tests. Difficult to see in the field and manage by certification.



PVY^{NTN} the tuber necrosis strain—

Mild mosaic on leaves. Most isolates cause tuber disease. Difficult to see in the field and to manage by certification.



A changing PVY

In the past decade, Potato Virus Y (PVY) has re-emerged in the USA as a serious disease.

PVY^{NWi} & PVY^{NTN} are taking over!

Some potential reasons -

- These strains cause mild symptoms
- Popular varieties don't show symptoms
- Late season infections go undetected
- Lab tests can be misleading

We are looking for definitive answers!

What is the concern?

If PVY^{NTN} becomes prevalent in the USA, then PVY becomes a tuber quality disease, not just a seed certification problem.

Susceptible varieties could be lost.

What USA varieties are at risk?

Variety	Tuber Necrosis
Highland Russet	Very Susceptible
Yukon Gem	Very Susceptible
Yukon Gold	Very Susceptible
Alturas	Moderately Susceptible
Blazer Russet	Moderately Susceptible
Norchip	Moderately Susceptible
Ranger Russet	Moderately Susceptible
Red Norland	Moderately Susceptible
Atlantic	Slightly Susceptible
Russet Burbank	Resistant
Premier Russet	Very Resistant
Russet Norkotah	Very Resistant
Classic Russet	Very Resistant

Variety testing continues.
See our website for updates.

What are the solutions?

- **Don't Plant a Problem** Plant only post-harvest tested certified seed known to have little to no detectable PVY.
- **Improve our Lab Tests** to rapidly and reliably detect isolates that cause tuber necrosis.
- **Minimize PVY Spread** on the farm.
 - Eliminate alternate PVY hosts
 - Separate seed & commercial fields
 - Manage aphids
- **Develop Resistant Varieties.**

Effective seed certification depends on visual symptoms and reliable lab testing. PVY^{NWi} and PVY^{NTN} symptoms are more difficult to see in the field and this leads to higher PVY incidence in seed stocks.



Help us prevent PVY from becoming a **Tuber Quality** issue!

Where to learn more?

Managing Potato Virus Y in Seed Potato Production
www.potatovirus.com

"Information on PVY" has the latest in best management practices for PVY.

Tuber disease caused by PVY

has swept across Europe in the past two decades. The reasons for this are unclear, but mild symptoms and slow recognition by seed certification programs did play a role. In the USA, the tuber necrotic strains of PVY are still confined and at low levels. A concerted effort by seed certification programs sanctioned by grower participation could keep this disease in check and prevent PVY from becoming a tuber quality disease – BUT the time to act is now. Delays will lead to widespread distribution of the disease, making management more difficult.



More resources for
Managing Potato Virus Y
on our website

www.potatovirus.com

Picture Gallery

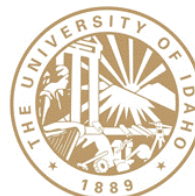
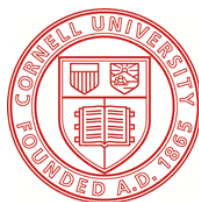
Discussion Forum

Information on PTNRD

Potato Virus Information

www.potatovirus.com

Find out about the new PVY, emerging in potato production, tuber defects like PTNRD (potato tuber necrotic ringspot disease), and susceptible varieties.



Our Goal

Diminish the new PVY in seed stocks and halt its spread through refinement of PVY management strategies used by growers and seed certifiers.

Funded by

USDA NIFA Specialty Crops Research Initiative Program
Idaho Potato Commission
University of Wisconsin Seed Potato Certification Program
University of Idaho
Montana State University Seed Potato Certification Program
Idaho Crop Improvement Potato Seed Certification Program
Minnesota Department of Agriculture Potato Inspection Unit
Maine Potato Board Certified Seed Program
Cornell University New York Seed Improvement Project
Colorado State University Potato Certification Program
Oregon State University Seed Potato Certification Service

Managing Potato Virus Y

PVY is Changing



The new PVY
causes a
tuber disease
known as PTNRD

Information about PTNRD

*Potato Tuber
Necrotic Ringspot Disease*

www.potatovirus.com

A website with comprehensive
information on PVY for the potato
industry