

2025 National Allium Research Conference
Lihue, Kaua'i, HI
1-5 December 2025



Stop the Rot

From Diagnostics to Field
& Storage Practices:
Developing Tools to
Manage Onion Bacterial
Diseases



<https://alliumnet.com/projects/stop-the-rot/>

USDA NIFA SCRI Project No. 2019-51181-30013



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

Stop the Rot: Combating onion bacterial diseases with pathogenomic tools & enhanced management strategies: 2019-2025

Columbia Basin
 1,000 A sweet;
 24,000 A storage

Bg Ec Pag

WSU
 OSU
 UI

Treasure Valley
 23,000 A storage

Bg Ec Pag

UCR

USU
 CSU

Rockies
 4,000 A storage

Bg Ec Pag
 Pan Xaa

Southwest
 31,200 A storage;
 28,700 A non-storage

Bc Bg Ec Pag

NMSU
 TAM

Midwest
 2,500 A storage

Bc Pag Pan

MSU

Northeast
 7,800 A storage

Bc Ec
 Pag Pan

Cornell
 PSU

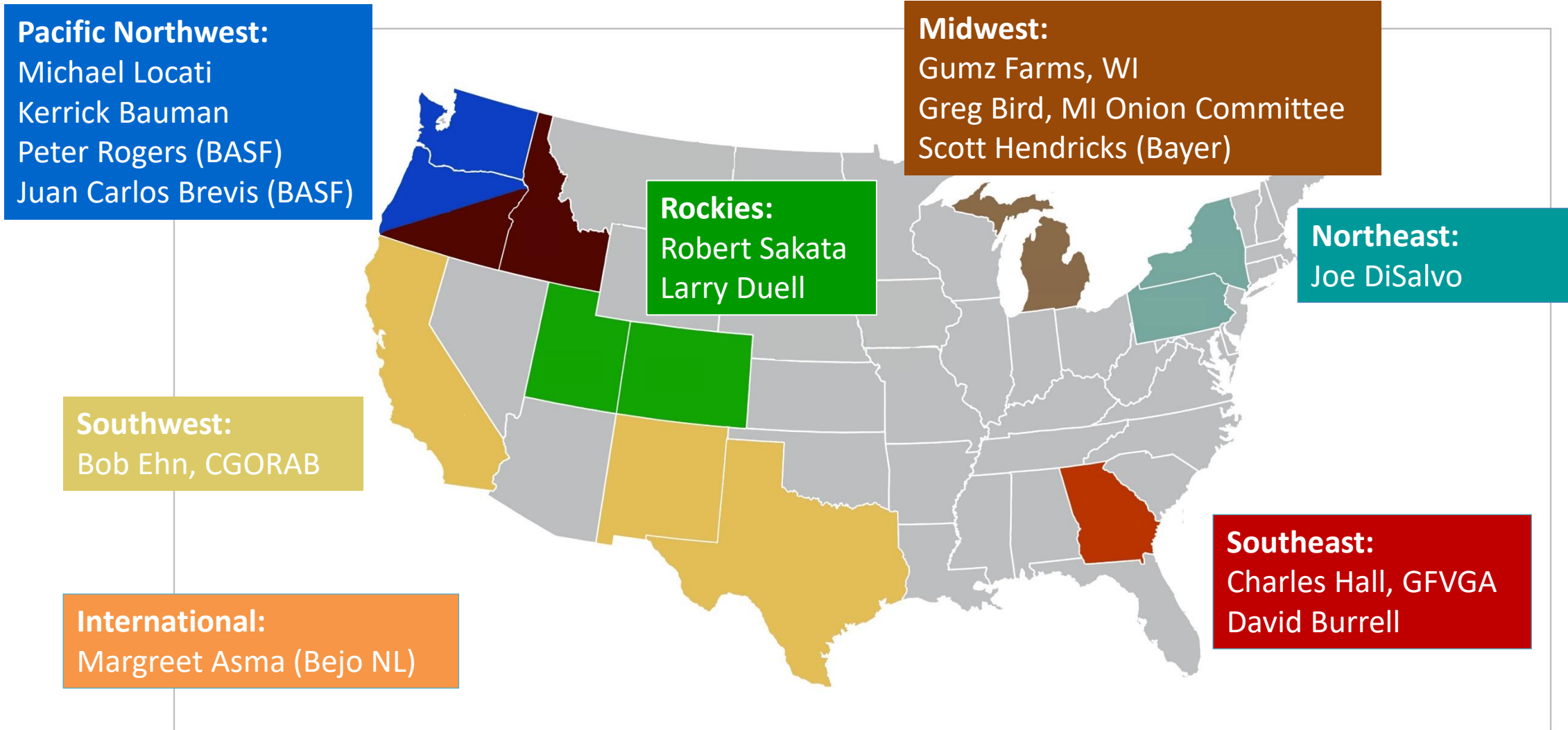
Southeast
 11,200 A sweet

Bc Pag Pan
 Pv Xaa

UGA



Stop the Rot – Stakeholder Advisory Panel



Stop the Rot

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- **Objective A: Onion bacterial disease characterization**
 - A1 – Survey onion crops nationally for bacterial pathogens
 - A2 – Genetic analyses, virulence factors, bacterial communities
 - A3 – Develop molecular diagnostic tools
 - A4 – Develop methods to screen for resistance to bacterial diseases
- **Objective B: Onion bacterial disease management**
 - B1 – Irrigation practices
 - B2 – Fertility practices
 - B3 – Pesticide programs
 - B4 – Cultural practices
 - B5 – Postharvest practices (application of disinfectants to bulbs)
 - B6 – Bacterial disease modeling/risk prediction
 - B7 – Extension/outreach
 - B8 – Economic assessments

MacKay, H., du Toit, L., and Hoepting, C. 2023. *Onion World* July/August 2023:6-7.

https://issuu.com/columbiamediagroup/docs/ow_july-august_2023?fr=sYmUxNzQ5MDQ1MjQ

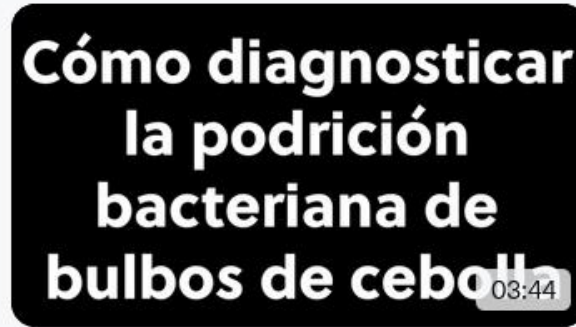


'Stop the Rot' video on managing onion bacterial diseases
<https://vimeo.com/1133694851>

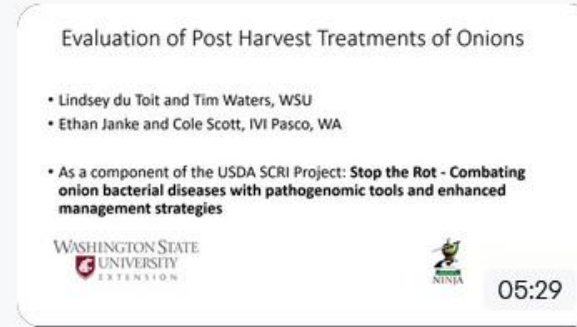
Stop the Rot videos: <https://vimeo.com/showcase/11738455>



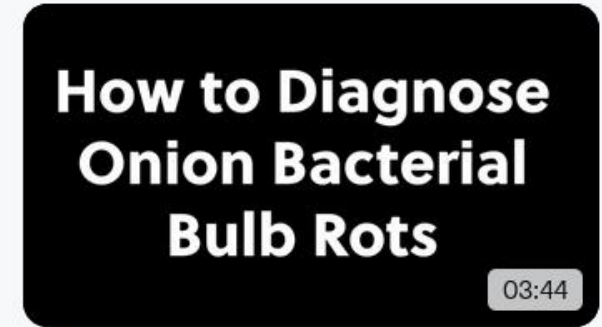
 **Combating Bacterial Diseases ...**
WSU CAHNRS Video Production



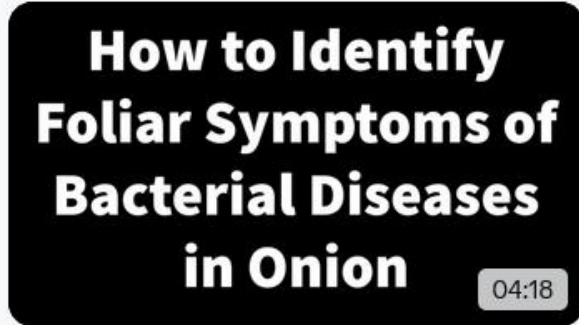
 **Cómo diagnosticar La putrefac...**
WSU CAHNRS Video Production



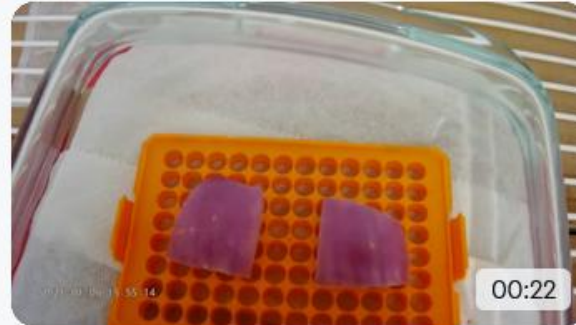
 **Evaluation of post harvest treat...**
WSU CAHNRS Video Production




 **How to Diagnose Onion Bacteri...**
WSU CAHNRS Video Production



 **How to Identify Foliar Symptom...**
WSU CAHNRS Video Production




 **Onion scale test (Nischwitz 1.11...**
WSU CAHNRS Video Production



 **Rolling Onions to Reduce Bact...**
WSU CAHNRS Video Production



 **Stop the Rot: Onion Bacterial In...**
WSU CAHNRS Video Production

Acknowledgements

- **WSU Stop the Rot teams** – Tim Waters', Gabriel LaHue's, and Lindsey du Toit's teams
- **Other Stop the Rot team members**
- **Grower-cooperators & CBORC**
- **IVI**
- **USDA NIFA SCRI Project No. 2019-51181-30013**

