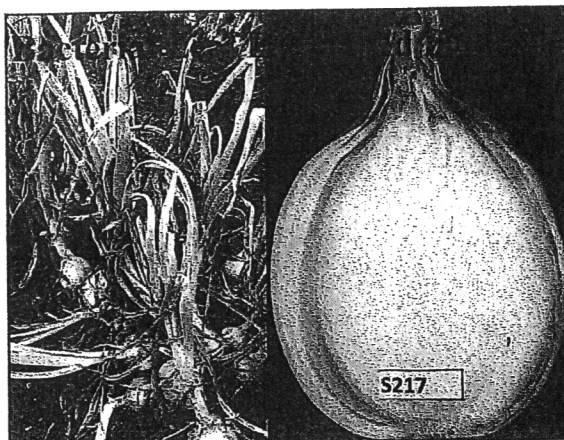


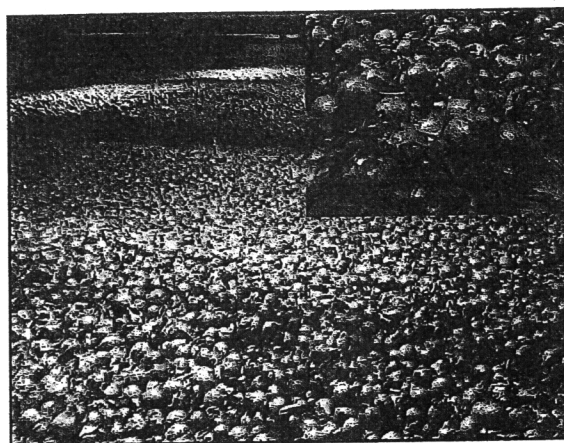
Identifying and Managing New and Old Onion Diseases

Dr. Mary Hausbeck and
Dr. Prissana Wiriyajitsomboon
Department of Plant, Soil and Microbial Sciences

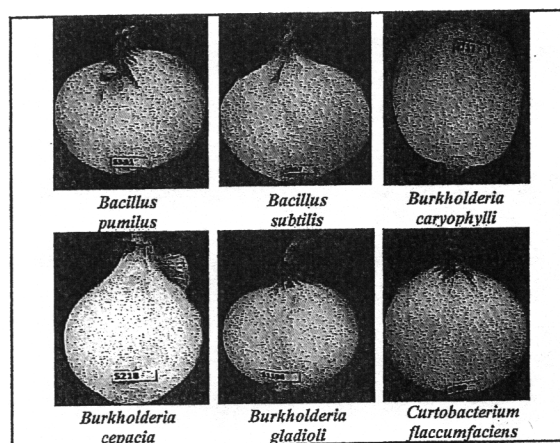
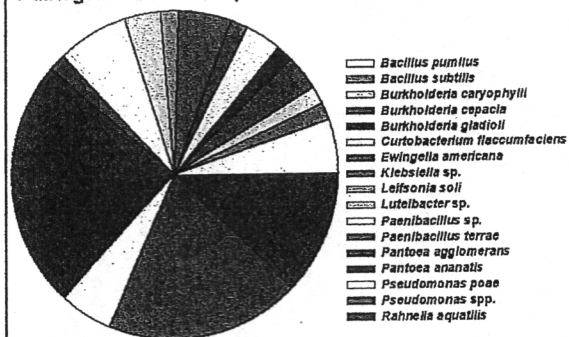


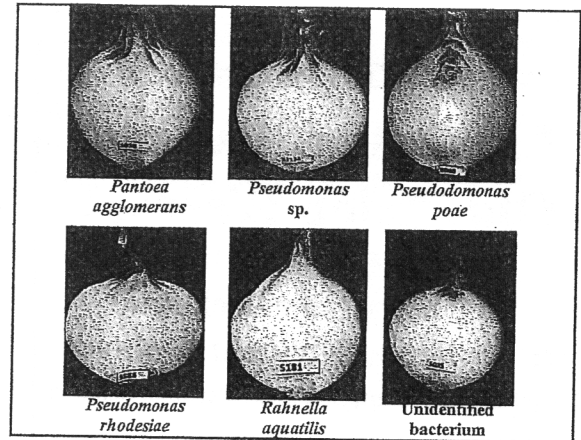
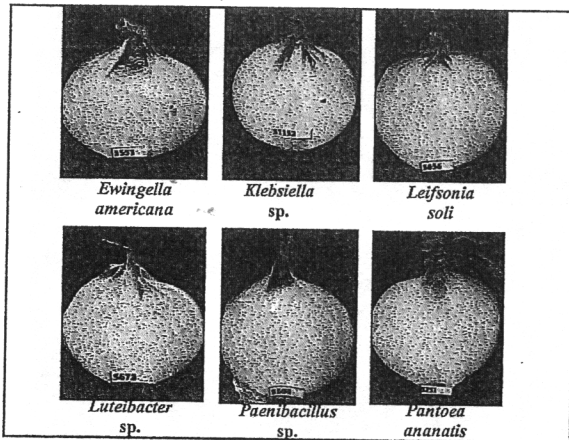
Onion Storage Rots

- Bulbs collected monthly from 3 storage sites from Jan-May.
- 3,150 bulbs total collected; 1,376 with rot symptoms, and 880 bacterial isolated obtained.
- Pathogenicity: 166 pathogenic, 714 nonpathogenic.
- Bacteria identified using BIOLOG or DNA sequencing.



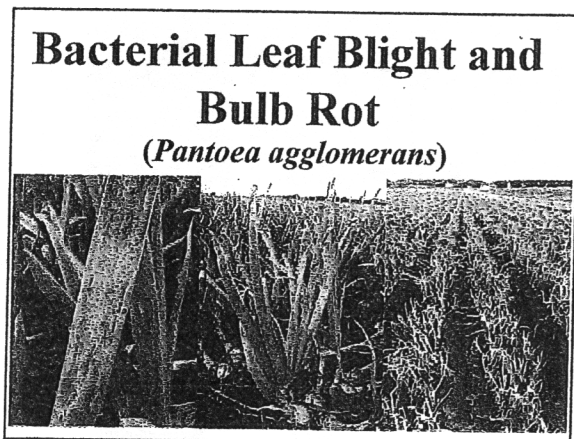
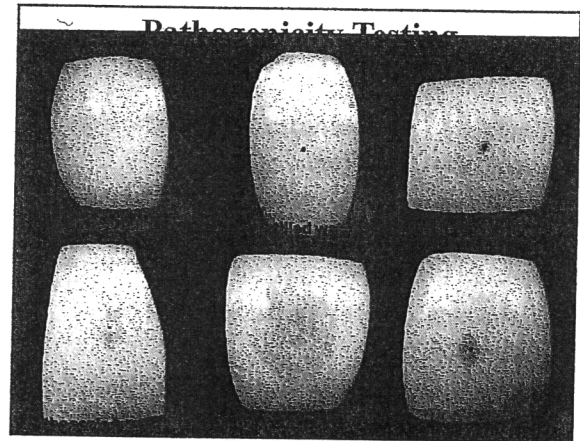
Pathogenic Bacterial Species Isolated from Stored Onions

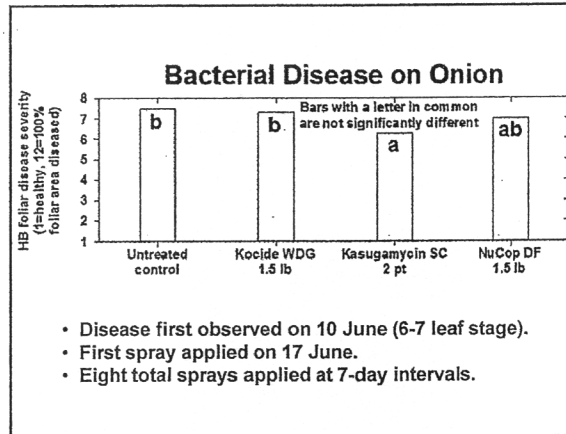
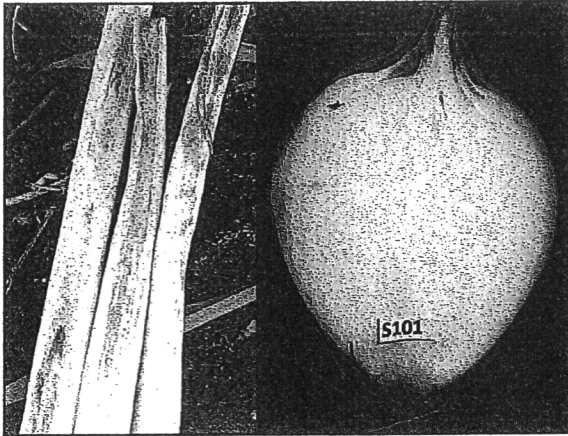




Bacterial Pathogenicity on Onion

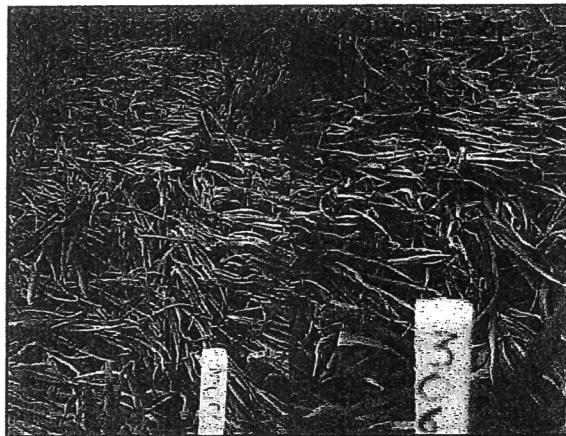
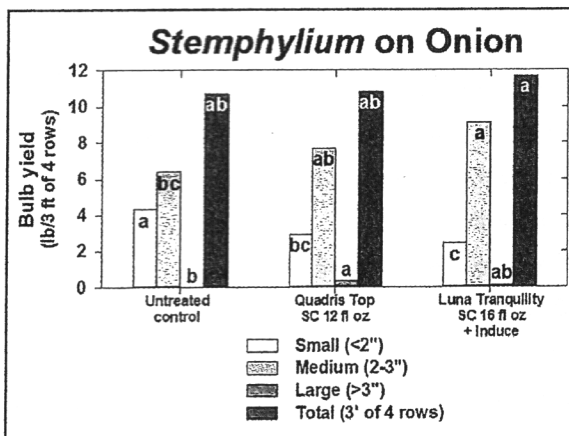
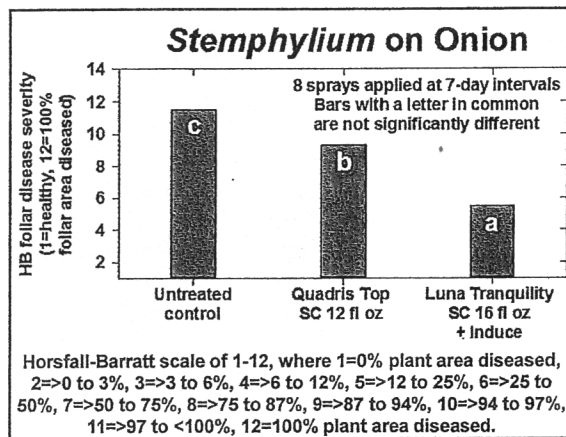
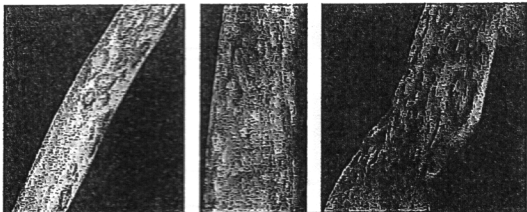
- Inoculated with sterile toothpick onto sterile onion slice, incubated 6 days, observed at 2-day intervals.
- 166 pathogenic isolates.
 - 58 identified.
 - 29: unknown
 - 79 lost in storage at 4°C for 2 months.

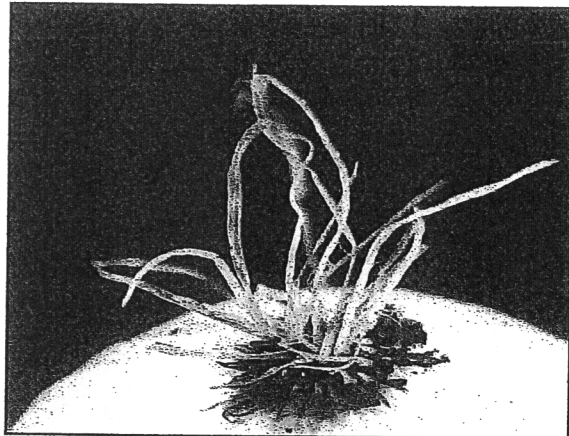
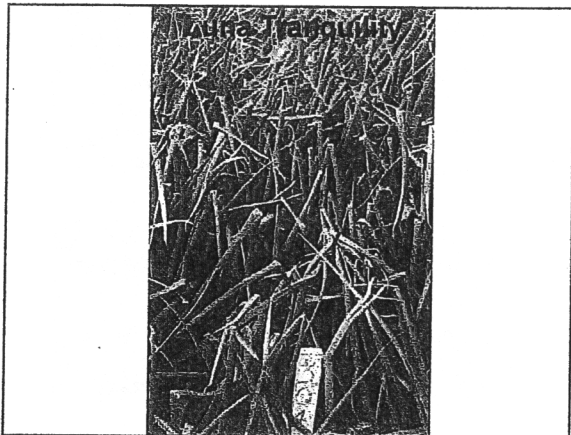




Stemphylium Leaf Blight

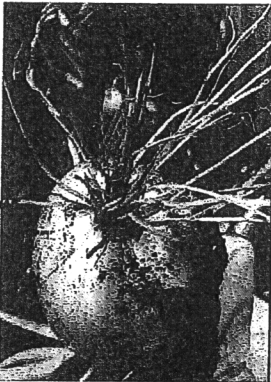
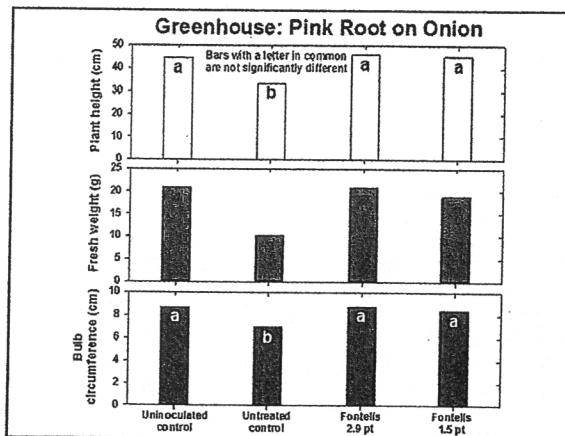
- Small with dark sporulation.
- Lesions blight the leaf.
- Favored by warm, humid weather.





Pink Root

- Fungal pathogen (*Setophoma terrestris*)
- Common in soils
- Favored by warm weather
- Symptoms
 - Below ground
 - Pink colored roots
 - Above ground
 - Small, stunted plants

Research in 2016 will focus on bacterial and fungal diseases.

- Assessing the role of onion thrips in bacterial leaf blight of onion
 - Zsofia Szendrei and Mary Hausbeck
 - GREEN grant

Acknowledgments

- MSU GREEN
- Michigan Onion Committee, Inc.
- Michigan Specialty Crop Block Grant
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- Larry Krummrey
- Bruce Keilen
- Phil Plakmeyer

