

# PINE WILT DISEASE: RESERVOIRS AND VECTORS

A McIntire-Stennis supported project



COLORADO STATE UNIVERSITY

WARNER COLLEGE  
OF NATURAL RESOURCES

FOREST AND RANGELAND  
STEWARDSHIP

Native pine species in the western U.S. were thought to be resistant to pine wilt, a disease that causes rapid tree mortality. Pine wilt has recently emerged along the Front Range of Colorado. While normally found in urban environments, the microscopic nematodes that cause the disease have now been confirmed in native forests near popular recreation areas at lower and higher elevations.

Transmission of the disease from urban forests to wildlands could have serious consequences for municipalities. Early action may reduce its spread throughout populated forest landscapes.

Colorado State University scientists are determining the disease's prevalence along the Front Range, identifying which insects transmit the disease, and estimating the timing of disease exposure.

This new knowledge will provide forest managers and homeowners with information to make better decisions regarding treatment of pine wilt disease in susceptible trees and determine the optimal timing for potential treatments and risks of infection.



## About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.



## COLLABORATION

Colorado State University researchers and students with the Forest and Rangeland Stewardship, and Bioagricultural Sciences and Pest Management departments are working with the City of Fort Collins to address pine wilt disease in the region.



### New Partnerships

Developing an agreement to sample wilderness sites in Rocky Mountain National Park

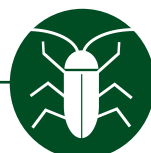
## IMPACT

This project will reveal unknown information about the dynamics of pine wilt and the microscopic nematodes that spread the disease.



### Hotspots

Determine the extent of pine wilt disease along the Front Range of Colorado



### Vectors

Identify the primary insects that harbor pine wilt nematodes



### Flight Windows

Model insect flight periods from May through October