

CAL POLY STRAWBERRY CENTER

Pathology & Entomology Research 2024

The goal of the Strawberry Center research is to increase the sustainability of the California strawberry industry through research and education that addresses grower needs. Key benefits to current research include disease detection, identification and control, as well as nonchemical pest management through the [Automation](#) program.



PROJECT	DESCRIPTION
PLANT PATHOLOGY	
Fungicide resistance and efficacy against Botrytis gray mold and powdery mildew	Summarizes multiple projects evaluating the efficacy of commonly used fungicides and the extent of resistance development for increased integrated pest management (IPM). Field trial is currently underway.
Susceptibility to Macrophomina root rot and Verticillium wilt in 63 cultivars and advanced breeding lines	Builds on eight years of previous research where strawberry varieties and elite breeding lines are evaluated for their susceptibility to these diseases under various field conditions to assist in increased IPM. Field trial is currently underway.
Investigating emerging diseases of CA strawberry	Investigates the role of minor soilborne pathogens, such as Pythium and Rhizoctonia, as well as abiotic agents, such as salt and drought, in causing disease in strawberry plants, leading to accurate detection and better management. Project is currently in lab assay stage.
Effects of abiotic stresses on Macrophomina root rot development in strawberry	Examines the effects of different water-salt concentrations on plant mortality caused by Macrophomina to better understand the role of salt stress in influencing Macrophomina root rot for increased disease management strategies. Field trial is currently underway.
Update on Fusarium Wilt Race 2	Investigates the development, spread and impact of Fusarium wilt race 2 on strawberries for early detection and management. Project is currently in field survey.
Disease Survey: 3-yr Summary	Survey to determine which pathogens are most prevalent and help prioritize future research efforts for improved disease management strategies. Field trial is currently underway.
Botrytis survey	Survey to understand how environmental factors, such as temperature, humidity and rainfall, influence disease incidence and progression for increased IPM and disease management strategies. Field trial is currently underway.
ENTOMOLOGY	
Evaluation of miticides for control of two-spotted spider mites	Investigates the efficacy of exciting and new miticides for control of two-spotted spider mites for increased IPM. Field trial is completed.
Evaluation of insecticides for control of Lygus	Investigates the efficacy of exciting and new insecticides for control of Lygus for increased IPM. Field trial is completed.
Lygus and two-spotted spider mite resistance status	Investigates the buildup of pesticide resistance among populations of two-spotted spider mites and Lygus bug in Santa Maria, crucial for developing sustainable pest management practices. Project is currently ongoing.

The Strawberry Center offers free strawberry disease diagnostic services for pathogen identification and management, helping to ensure timely and accurate diagnostics for maintaining healthy strawberry crops.

Contact Kyle Blauer at kblauer@calpoly.edu for more information.