



## Bacterial Diseases of Fruit Crops

### **Program Leader:**

Tom Burr, Professor  
PPPMB, Geneva

### **Program Objectives:**

Assist growers in controlling bacterial diseases through diagnosis and development and implementation of methods for effective detection and management.



Tom Burr  
[tjb1@cornell.edu](mailto:tjb1@cornell.edu)  
315-787-2211

### **Program Summary:**

Fruit crops are plagued by several bacterial diseases that for the most part cannot be controlled with chemical sprays. Thus an important aspect of my extension effort is to assist growers with diagnosis of disease and communicate on how the diseases can be managed. We focus on crown gall disease of grape and other crops, bacterial canker of stone fruits, bacterial blister spot of apple and others. Relevant applied research is aimed at development of effective methods to index grape propagation material for the grape crown gall pathogen, *Agrobacterium vitis*, and on development of methods to manage the disease. Biological control is one promising means of disease management and we are studying how a biological control for grape crown gall can be effectively implemented in commercial vineyards.



Crown gall in grape vineyard in NY

### **Program Justification:**

Bacterial diseases cause significant losses to agriculture across NY state. Unlike fungal diseases, there are few spray options for bacterial disease and therefore management usually relies on resistant varieties, cultural management or other strategies such as biological control. It is essential to communicate with growers to help them understanding the cause, source and potential management of bacterial diseases.

### **Impact to Industry:**

Few bacterial diseases of fruits and vegetables can be effectively controlled with chemical sprays. Therefore assisting growers in diagnosis of bacterial diseases and conveying relevant information of pathogen biology, spread, conditions that result in disease management strategies are extremely important. Our research has led to methods for producing crown gall-free grapevines. Indexing propagation material is another key component to management and we are improving indexing methods by making them more sensitive and efficient. Programs at NYSAES contribute substantial value to the overall research, teaching and extension mission of CALS and the University. Overriding goals of the research that will be done in the ASRL are to provide targeted discovery along with assistance, specific training and other critical support that significantly impacts the development and prosperity of agriculture and food businesses across New York.

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### **Program Team Members:**

Cheryl Reid, Technician  
Supaporn Kaewnum, Postdoc

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