The Fruit Tree National Clean Plant Network

2009 - 2010

Southeastern Budwood Program

Clemson University
The Southeastern Peach Production Industry

States involved

South Carolina  #2
Georgia  #3
Tennessee
Many others
South Carolina \rightarrow Tennessee \rightarrow Others \rightarrow Georgia
Southeastern Budwood Program

Began in 2000 after discovery of PPV in PA.

Blocks of trees of commercially significant cultivars located in production orchards are identified and individual trees within each block are tested for the presence of PPV, PNRSV, and PDV using ELISA. (Common stock)

Maps of the blocks containing information on viral status are supplied to the 3 major nurseries in TN prior to June 1 so that budding to produce “june-budded” trees is possible.
Currently testing blocks of over 40 cultivars at locations in GA and SC. This involves collecting over 2,000 samples and completing 6,000 ELISA assays per year in the period April 1- May 16. In addition, approx 3,000 trees used to produce the Guardian rootstock are tested annually for the same 3 viruses.

Maps supplied to 3 major Nurseries (Cumberland Valley, Freedom Nursery, and Vaughn Nursery).
Blocks of trees established from the tested common stock blocks appear free of these 3 viruses and have, in some cases, remained free of virus for at least 9 years.
Replacing the blue metal tags with livestock ear tags attached to trees with aluminum wire.
Goals for 2009 - 2010

Erect a screenhouse ready to accept G1 material from Prosser.

Have a source of virus-tested rootstocks ready to accept this material.

ELISA capability

Virus-testing of blocks in commercial orchards (Gx) southeastern Budwood program.

Fill full-time technical support position
Have a source of virus-tested rootstocks ready to accept this material.

Trees of Lovell and Nemaguard rootstocks tested annually for the presence of PNRSV and PDV have been maintained at Musser Research Farm for the past 15 years. Tests are by ELISA and Shirofugen assay.

The blocks of seed used to provide Guardian root stock have been tested annually for the presence of PNRSV, PDV, and PPV for the past 5 years using ELISA.
ELISA capability
ELISA testing is completed in these two labs and an adjacent area. Samples are processed in the adjacent area and then the microtiter plates are processed in the two labs. The labs are equipped with an ELISA plate reader and all the dispensing equipment needed to process plates. A plate washer with robotic stacker is to be added to increase efficiency and throughput.

Virus-testing of blocks in commercial orchards (Gx) southeastern Budwood program.

14,058 individual ELISA assays to screen material in the Southeastern Budwood Program were completed during the past 14 days.
Erect a screenhouse ready to accept G1 material from Prosser.
Bids to erect this house are due May 12, 2010. Completion date September 1, 2010.
Fill full-time technical support position

David Bishop began work April 5, 2010.

He has experience in working with peach, green house control systems, many other aspects of horticulture, and tissue culture.