Abscission Trials

CMNP model for predicting sweet orange loosening

Objective: To develop a mathematical model as a tool for growers and mechanical harvesting companies to aid scheduling of CMNP application to aid mechanical harvesting of sweet oranges.

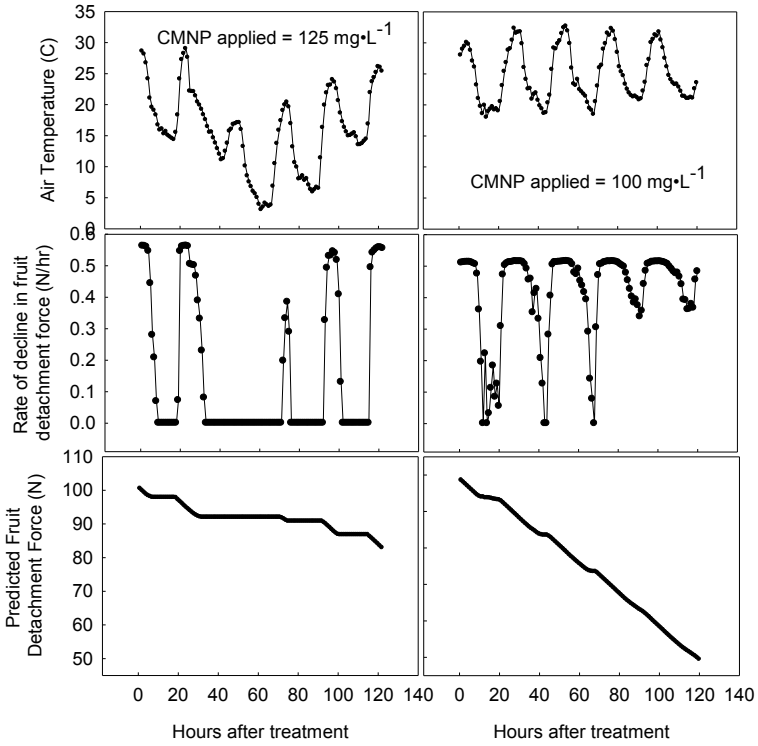
Current inputs:

- CMNP concentration
- Air temperature

Assumptions: Assume CMNP applied to drip

Examples of use:

- Top figure on right shows example of rate of loosening as it's affect by temperature.
- Middle figure on right shows rate of loosening over time at two concentrations of CMNP. The model currently works very well at 300 ppm, but we still have to adjust it for 200 ppm.
- We are also determining rate of drop for development of a predictive model.

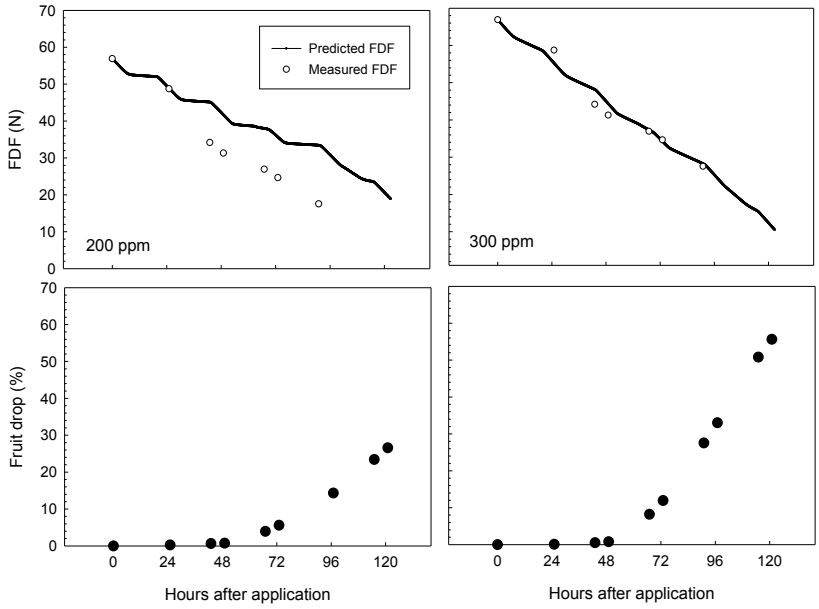


Rate and Removal studies

Objective: To determine harvest efficiency at various CMNP concentrations and canopy shaker settings of 'Hamlin' and 'Valencia' at various times during the harvest season.

Treatments:

- CMNP: 0, 200, 300 ppm at 300 gal/acre
- Canopy Shaker settings: 180, 220, and 260 cycles per minute (cpm)



Examples of data:

- See figure in lower right
- Preharvest drop
- Removal efficiency

Results to date:

- Drop increases with later harvest date
- CMNP effect more pronounced at lower harvester settings