

Urban and Small Farms Conference Breakout Sessions
Berry/Vegetable Track
Thursday, February 20, 2014

8:00 am Gray mold - Claudia Nischwitz, USU

This presentation will cover berry rots of strawberry, raspberry, and blackberry that the grower could encounter in Utah including gray mold, anthracnose, etc.

Mite management and Raspberry Horntail Update - Diane Alston, USU

Mite management and raspberry horntail update of key strategies to reduce spider mite infestations in caneberries, and updates on timing control of raspberry horntail and raspberry cultivar susceptibility to horntail.

9:00 am Blackberry production systems in Oregon & how to best manage primocane-fruiting types - Berndine Strik, Oregon State University

There are over 8,000 acres of commercial blackberry cultivators grown in Oregon. The production systems and cultivators grown will be highlighted. Dr. Strik's program has developed the pruning and training methods used to successfully grow primocane-fruiting blackberry for fresh market in various production regions worldwide. Learn how to best manage this relatively new type of blackberry.

10:30 am Protected cultivation - part 1 Fans, flames and fumes: Freeze protection in the field- Brent Black, USU

11:00 am Low tunnel and high tunnel strawberry update - Tiffany Maughan, USU

This presentation is an update on the high tunnel, low tunnel, and supplemental heating research that has been ongoing at Utah State University. Tiffany will be focusing on low tunnel effectiveness for strawberry production (both as a low tunnel only system and when used in conjunction with a high tunnel) as well as discussing results seen when the soil was heated in early spring.

Low cost/low energy tunnel automation- Britney Hunter and Brent Black, USU

1:00 pm Protected cultivation - part 2 Commercial shading of raspberries - Jeff Mitchell, Utah County grower

Jeff will discuss shade netting, timing and the costs and benefits of raspberry production.

Biological and Mechanical Approaches to Sunscald Management in Bell Pepper Production - Sam Day, USU

We investigated the effect of low tunnels and shade cloth on the incidence of sunscald of bell pepper during the summer of 2013. The variety Aristotle was planted in a single un-mulched bed (north to south orientation) system on May 21-22. Peppers were grown and managed using commercial practices. Clear perforated plastic low tunnels (1.1 mil; 16 in tall - 16 in wide) were used from May 22- June 7 to increase plant growth. After fruit set, 30% shade cloth was installed vertically or horizontally above the plants providing partial and full shade throughout a day. This was done in an effort to reduce the exposure of fruit to solar radiation. Sunscald occurs when fruits absorb and convert solar radiation to heat resulting in elevated fruit surface temperatures (FST). Low tunnels increased leaf area, leaf number, and stem and leaf mass. While low tunnels increased fruit shading they were not effective at reducing sunscald unless

combined with mechanical shading. Green and red marketable yields were highest under horizontal shade, followed by vertical shade, and were lowest in the non-shaded control. Fruit size and quality increased while stem and leaf mass decreased with shading. Horizontal shade reduced radiation levels and FST of bell peppers below the temperature threshold for sunscald (40-42°C). Vertical shade reduced the duration of fruit exposure to damaging solar radiation levels but resulted in higher levels of sunscald. In conclusion, installing 30% shade cloth is an effective way to decrease sunscald by shortening the duration of fruit exposure to damaging solar radiation (vertical shade), or effectively eliminating sunscald all together (horizontal shade).

High Tunnels: Design and Production - Ron Patterson, USU

Ron will discuss the mistakes and some solutions to high tunnel production. As well as include high tunnel design evolution and growing practices.

3:00 pm High Tunnel Bean and Pepper Production - Dan Drost, USU

Over the last 9 years, Utah State University has been actively evaluating seasonal growth extension approaches by growing plants in high tunnels. Our recent work focuses on improving early production of beans and peppers. The primary goals for early green beans is to ensure adequate plant stands and provide product at least 3-4 weeks before outdoor production. While green bell peppers can easily be grown in high tunnels, achieving early red (colored) fruits is more time consuming but potentially more lucrative. During the pepper section of this presentation, we will discuss those things that can be done to increase early color development in pepper. By using proven production techniques, high tunnel growers can capture early (or late) season markets, improve plant performance, and increase farm profitability. Those attending this presentation will have a better understanding of high tunnel bean and pepper production and learn how to get MORE with LESS.

Field vegetables Pumpkin trial- Taun Beddes, Utah State University

4:00 pm Cucurbit disease - Claudia Nischwitz, USU

This presentation will cover disease problems of cucurbits including powdery mildew and watermelon mosaic virus.

Corn earworm and Insect Vectors of Vegetable Diseases - Diane Alston, USU

This presentation will include an overview of corn earworm and insect vectors of vegetable diseases. A review of key corn earworm management strategies and monitoring of moth populations with traps will be included. Also, Diane will discuss of the primary insect vectors of vegetable diseases and their management.