

early genotype and a mid-season genotype was 46 days. Leaf and flower initiation can be affected by water availability, temperature, photoperiod, and genotype. In this study, differences between accessions were genotypic and indicate an existing level of genetic variability. The evaluation and utilization of such variability is essential in breeding programs and can contribute for the development of cultivars that are suitable for different agro-climates.

9:15–9:30 am

Correlation of Leaf Anatomy and Plant Growth among Clones of Bio-Energy Oil Plant *Cornus wilsoniana*

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Cornus wilsoniana Wangerin, a member of Cornaceae, is a deciduous or evergreen tree or shrub that is endemic to China. It is an important plants for its ecological significance and economic value. Its fruits, which have rich oil with high oleic and linoleic acid, had been utilized for edible oil production for centuries. Today, this plant is an important biodiesel feedstock in China and brings a lot of research and development attention. Many existing plantations from natural seedlings had little or no use due to its height and lower yield. To establish new plantation, dwarf plants with high yield have to be selected. Correlation between leaf anatomy and plant growth of 10 *C. wilsoniana* clones were analyzed. The findings indicated that leaf area and thickness had little relationship with plant growth. However, leaf anatomical structures, especially thickness of spongy tissues, significant positively correlated with stem diameter at the ground level. Internode length positively correlated with palisade thickness, but negatively related to the spongy layer thickness. So did as to ratio of palisade to spongy tissues. Internode length determines branch length, as well as habit and plant height. We could use the palisade thickness and ratio of palisade and spongy tissues to predict the dwarfness of potential clones of *C. wilsoniana*.

Wednesday, September 28, 2011

8:00–9:45 am

Kings 3

Weed Control and Pest Management 3

Moderator: Gary Bender

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8:00–8:15 am

Whitefly Pesticide Use and Efficacy in Arizona Ornamental Plants

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Sweetpotato whitefly, *Bemisia tabaci* are a major pest of ornamental and agricultural crops in Arizona. They cause injury such as leaf curl, sooty mold as well as transmit viruses that cause plant death. A recent whitefly dispersal study, conducted in Yuma County, reemphasized that whiteflies are considered major pests between June and October. Average whitefly trap counts for this time in 2008 and 2009, were 1000 and 1500 per trap, respectively. A comparison of populations between the City of Yuma and surrounding agricultural areas found that agriculture in the western regions of Yuma influenced whitefly populations immediately adjacent to the city (Bealmear, unpublished 2009). This movement leads to questions about management. A survey of pesticides used in Arizona agriculture was done in 1995, while similar chemistries are available for ornamental plants these products were not included in the survey. In Feb. and Mar. 2010 a statewide survey was administered to home gardeners to determine which whitefly control products they used. Two hundred and seventy-nine people, mostly homeowners, responded to the survey. Participants from seven counties indicated whiteflies were pests in their gardens, Yuma residents responded with the highest number. Nine different products were evaluated for efficacy in July and Aug. 2010 to see which one had the highest efficacy. Preliminary data showed that while some products reduced whitefly numbers nothing worked consistently throughout the treatment period.

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8:15–8:30 am

Not Presented

8:30–8:45 am

Not Presented

8:45–9:00 am

Developing an IPM Strategy for *Tomato spotted wilt virus* in California

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