



North American Blueberry Research and Extension Workers Conference

Kalamazoo, Michigan

July 25-28, 2010

MONDAY, JULY 26

- 8 am** **Welcome Session**
- *Opening of NABREW 2010. Welcome and housekeeping. Eric Hanson, MSU*
 - *Welcome to Kalamazoo. Greg Ayers, Discover Kalamazoo*
 - *Welcome on behalf of Michigan Ag. Experiment Station and MSU Extension. Doug Buhler, MSU*
- 8:30 am** **Keynote Address**
History of the North American Highbush Blueberry Industry. Mike Mainland, NCSU
- 9.30 am** **Breeding:**
- Approaches to breeding for parthenocarpic fruit development in blueberry
 - The use of tetraploid intersectional hybrids in *Vaccinium* breeding
 - A multi-disciplinary approach to sustainability and profitability of U.S. blueberry production using the tree-like species *Vaccinium arboreum*
- 10:15 am** **Break**
- 10:45 am** **Genetics and Breeding**
- Recent advances in blueberry transformation
 - Isolation and functional association of a blueberry CBF transcriptional activator with cold acclimation and freezing tolerance
 - Transformation of a blueberry-derived *CBF* gene into a southern highbush blueberry cultivar
- 11:30 am** **Lunch**
- 12:30 pm** **Blueberry Culture**
- The Texas blueberry industry – history, trends and cultural strategies
 - An update of highbush blueberry industry and research activities in Korea
 - Something new in blueberry growing in China
 - A comparison of continuous nitrogen fertigation to conventional granular fertilizer in highbush blueberry
 - Field evidence for lateral transfer of water and nutrients in highbush blueberry: debunking a myth
 - Drip fertigation assessments with two blueberry varieties in Northern Argentina
 - Gypsum rate evaluation for Maine wild blueberry (*Vaccinium angustifolium* Ait.)
 - Establishment and management of the cultivated lowbush blueberry (*Vaccinium angustifolium*)
- 2:30 pm** **Break and Poster Session**
- 3:30 pm** **Blueberry Pollination**
- Developing an understanding of blueberry pollination ecology in North Carolina
 - Friend or foe? Pollinators as disease vectors
 - Precise dissemination of biological fungicides by bumble bees for Botrytis control in rabbiteye blueberry
- 4:15 pm** **Post Harvest**
- Effects of harvest date and overall bush ripeness on flavor and storage of ‘Liberty’, ‘Elliott’ and ‘Aurora’
 - Evaluation of postharvest quality of three commercial blueberry cultivars based on two types of clamshells
- 6 pm** **Dinner on your own, or join guided groups to local restaurants**



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Registration and hotel details online at nabrew.anr.msu.edu

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TUESDAY, JULY 27

Concurrent sessions on :

Organic blueberry management

- 8 a.m.** *20 minute invited overview talks*
Organic wild blueberry research & extension in Maine
Producing organic blueberries in Georgia
Organic highbush blueberry production systems
research – management of plant nutrition, irrigation
requirements, and weeds
Status update on Michigan and Great Lakes region
organic blueberries
- 10 a.m.** **Break**
- 10:30 a.m.** **Organic Blueberry *continued...***
Nitrogen release patterns from organic nutrient sources
Effects of organic and conventional management on
plant health and soil biology in Michigan blueberries
Efficacy of organically acceptable materials for control
of mummy berry on wild blueberries in Maine
Disease control options for organic blueberries
General organic round table discussion
- 11:30 a.m.** **Lunch**
- 12:30 p.m.** **Extension and Outreach**
Creating a Community of Practice for blueberries
Training underserved growers on good agricultural practices for food safety: overcoming barriers to adoption
- 1 p.m.** **Blueberry Pests and Their Management – session 1**
Moss competition dynamics and suppression technologies in wild blueberry production
Effect of nitrogen regime on blueberry overwintering, stem blight and Phomopsis susceptibility,
and aphid population density
Suppression of Monilinia blight: strategies for today and potential fungicide options for tomorrow
Optimizing pesticide performance and application methods for blueberries
The status of integrated pest management for insect pests of blueberries in California
- 2:30 p.m.** **Break and Poster Session**
- 3:30 p.m.** **Blueberry Pests and Their Management – session 2**
Status of Spotted Wing Drosophila as a pest of blueberries in the Western United States
Life-stage activity of broad spectrum and reduced-risk insecticides on cranberry fruitworm in highbush blueberry
An effective IPM program for managing fruitworms in highbush blueberry
Rainfastness of insecticides to control Japanese beetles in blueberries
- 6 p.m.** **Conference Dinner at the Kalamazoo Air Zoo**

Blueberry genomics

- 15 minute talks...
- Microsatellite markers: valuable in *Vaccinium*
Generating genomic tools for blueberry improvement
Developing tools for long term breeding of blueberry
germplasm for UK production
Progress in blueberry research in New Zealand
- Break**
- Blueberry Genomics *continued...***
Update on the diploid blueberry (*Vaccinium corymbosum*)
draft genomic sequence and efforts to integrate
genomic sequence with genetic mapping
Does pollen' neighborhood' affect yield in lowbush
blueberry (*Vaccinium angustifolium*)?
General genomics round table discussion

WEDNESDAY, JULY 28

- 8 a.m. - 7 p.m.** **Tour of southwest Michigan blueberry farms and processors**
The tour will visit several large blueberry farms, packing and processing facilities. We will also visit U-pick and roadside markets that sell value-added products such as blueberry souvenirs, preserves, and will view modern mechanical harvesting equipment in the field. Includes lunch at a winery and dinner at a blueberry farm.



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Monday Poster Sessions

Genetics and Breeding

- 'Pearl' southern highbush blueberry
- Stability of transgenes in blueberry
- Nutrient distribution in 'Tifblue' rabbiteye blueberry

Blueberry Culture

- Potential for mechanical harvest of Florida blueberry cultivars and selections
- Effect of rootstock on the growth of 'Spartan' highbush blueberry in Korea
- Production of blueberries in Poland
- Fruit set and berry weight of four rabbiteye blueberry cultivars following exposure to sub-freezing temperatures during flowering
- Fruit development period of several southern highbush cultivars
- Comparison of single and split application of gypsum for wild blueberry (*V. angustifolium*)
- Nutrient requirements of 'Tifblue' rabbiteye blueberry.
- Preliminary examination: evaluation of blueberry types and cultivars for the advance shipping in unheated plastic house culture

Blueberry Pollination

- Commercial bumble bee pollination of lowbush blueberry
- Bees in Michigan blueberries and estimating their contribution to fruit production

Post Harvest

- Extraction and analysis of pectin from blueberries (*Vaccinium corymbosum*)

Tuesday Poster Sessions

Blueberry Genomics

- Transcriptome analysis of blueberry using 454 EST sequencing
- Preliminary analysis of genetic diversity in lowbush blueberry (*Vaccinium angustifolium*) across its native range
- Chilling requirement, cold hardiness and fruiting characteristics of a 'Draper' x 'Jewel' population planted at multiple sites
- EST-PCR markers developed from highbush blueberry sequences are useful for genetic fingerprinting and relationship studies in rabbiteye blueberry
- Evolutionary relationships in *Vaccinium* section *Cyanococcus*

Organic Blueberry management:

- Reaction of blueberry (*Vaccinium corymbosum*) to GIBB Plus application

Extension and Outreach:

- Growing blueberry knowledge via social networks
- Enviroweather for improved blueberry management decisions in Michigan

Blueberry pests and their management:

- Blueberry gall midge: an emerging pest of Michigan blueberries?
- Anthracnose fruit rot resistance in blueberries: evaluation of a rapid screening technique and correlation with fruit characteristics
- *Valdensinia* leaf spot suppression in wild blueberry production
- The entomology blueberry IPM research and extension program at Rutgers University
- Survival of southern highbush blueberry cultivars in a *Phytophthora* root rot infested field in South Mississippi

Health Benefits /Nutraceuticals

- Diversity and abundance of anthocyanins in blueberry (*Vaccinium*) species with different multiploidy levels, implications for genetics research and human health