# **CropHealth Advising & Research** Rural P.O. Box 28098, Kelowna, B.C.

## То

Date

**JOHN BYLAND** 

Cc: Chris Brown, Hannah Bowles, Cory Coghill

Thursday December 11, 2008

The "2008 Farwest Show" was

Attendance this year was reported

This 3-day annual meeting

For more information, visit

2 pages from Mario Lanthier



# Planting the 21<sup>st</sup> Century Urban Forest

Richard Olsen, US National Arboretum, Washington DC What will the urban forest look like in 2070?

- Breeders have to think today to release a "new" tree in 2040 to plant in 2050 to 2070.
- What if the climate is warming? "Increase the market, save the planet."
- To reduce carbon footprint, Chicago must plant 5 million trees!
- Some trees may "disappear" from the market.
- Red oak is prone to diseases in warm, hot weather. So is London plane tree.
- Norway maple and Sycmore maple are invasive. Hackberry "dead on arrival". Breeders are working on these trees for the future.
- Resurrecting American elm, Zelkova, Kentucky coffee tree, lindens, catalpa.
- Nyssa sylvatica, "2008 urban tree of the year". Hybrid oaks are here to stay.

### **ENERGY-EFFICIENT GREENHOUSE PRODUCTION**

#### Dr. Erik Runkle, Michigan State University

More information at "greenhouse energy website" at www.hrt.msu.edu/florAoE.

#### # 1: Don't cheat on heat

- Crops grown under cooler temperatures take longer to reach finish size.
- If using cooler temperatures, start the production earlier, or start from larger plugs.

### # 2: Use a retractable energy or shade curtain

- 80% of heat is used at night.
- A closed-weave curtain (35% shade) can reduce night heat loss 40 to 60%.

## # 3: Maximize light and provide supplemental light to plugs

- Use high-pressure sodium lamps to minimize shading until mid-March.
- Cost is returned quicker with plugs (light shortens finish time) than with finished crop.
- Higher light levels help with more flowers, faster time to flower, increased stem size.

### # 4: Provide long-days to long-day plants

- At least 10 footcandles until early April, when days become longer.
- In general, provide long days to plants until flower buds become visible.
- Long-day plants include Fuchsia, Lobelia, Pansy, Petunia, Rudbeckia, Verbena.

## # 5: Improve insulation

- Use IR and anti-condensation poly as the inside layer of a double-poly greenhouse.
- Inflate all double-layer roofs, to ensure blower fans continue to work through winter.
- Best payback: Repair leak of compressed air / Install AC poly / Insulate hot water pipe.

#### # 6: Grow cold-tolerant and cold-sensitive crops seperately

- Cold-tolerant crop at 60 to 64°F (Alyssum, Campanula, Gaillardia, Petunia, Rudbeckia)
- Cold-sensitive crop at 72 to 75°F (Celosia, Coleus, Poinsettia, Purple fountain grass)

## # 7: Use greenhouse space efficiently

- Avoid gaps between crops.

## # 8: Start with a larger / older plug

- Heat + lighting costs are lower per plant during plug stage, higher during finish stage.
- A larger plug takes longer to produce in propagation, but arrives sooner at finish stage.

## # 9: Install horizontal airflow fans

- Improves temperature uniformity by mixing warm air near roof with cool air near floor.
- Air movement helps reduce humidity on plants and possible disease problems.

## # 10: Use a positive DIF and increase the deadband

- Increase day temperature, lower night temperature, to maintain the same average.
- However, positive DIF (warmer day vs night) results in more stretch and taller plants.