



Joint Northern Silviculture Committee and Forest Nursery Association of BC

Meeting allows silviculturalists and



Al Wiensczyk photo

Conference attendees discuss restoration efforts in a juvenile pine stand infested by mountain pine beetle.

by Al Wiensczyk, Extension Specialist, Ecosystems and Stand Management

For the first time, the Northern Silviculture Committee (NSC) and the Forest Nursery Association of BC (FNABC) have combined their annual meetings, and according to many participants, the event was a big hit. Appropriately, the conference was entitled “Making it Work.”

“[It’s] good to have both groups together. We are linked, and too often don’t have the opportunity to talk to each other” commented one participant at the joint summer conference and field tour held September 28–30, 2009 in Prince George. Said another participant: “[It’s] good to learn about the grower’s perspective on seedlings from seed to seedling” while another suggested to “maybe have a joint NSC/FNABC workshop every 2–3 years.”

One of the key messages presented at the conference by both **Diane Haase** (USDA Forest Service) and **Steve Grossnickle** (CelFor) was the need for all involved in the reforestation effort to remember that “seedlings are biological organisms and, as such, must be handled carefully throughout the lifting, grading, storing, handling, transport, and planting processes.” Stresses (e.g., moisture,

temperature, and physical stresses) at any step in the reforestation process are cumulative and can have a significant impact on post-planting seedling performance.

Another key message presented by Grossnickle and echoed by **David Lloyd** (Treeplus) was that effective root growth is critical to plantation performance. “If we can’t grow roots, we can’t grow trees,” said Lloyd. Lloyd’s presentation focused on what he considered to be the four key words for plantation success: Survive, Surpass, Withstand, and Dominate. More specifically, he said, seedlings must **survive** the risks associated with the nursery, storage, planting, and first-year conditions; **surpass** any competing vegetation; **withstand** any long-term plantation risks (e.g., animal damage, insects, and disease); and **dominate** the developing forest stand.

Keeping with the stock-handling theme in the field-tour portion of the conference, **Colin Chisholm** and **Deanna Gleave** (Folklore Contracting) walked participants through the seedlings’ journey from truck to soil. Correct procedures vary, depending on whether you are planting spring stock or summer stock. With spring stock, the key is to keep them from actively growing until AFTER they are planted. This involves keeping seedlings cool until they are put in the ground. For summer-planted stock, the trees are on their path to dormancy in preparation for their first winter in the field. Therefore, on-site storage techniques are aimed at keeping them on that path and avoiding any late-season needle flush.

The field tour also included a stop at a young pine stand infested by mountain pine beetle. **Cezary Slugocki** (Erafor) outlined the assessment tools (Return on Investment [ROI] and Multiple Accounts Decision Analysis [MADA]) that are being used, along with the professional judgement of the Forests For Tomorrow staff, to select stands for treatment. He also led participants in a discussion of the various treatment alternatives.

Other stops included a visit to a newly established, high-density (4300–4500 stems per hectare) lodgepole pine-planting trial. This plantation is being set up for multiple thinning entries, which will remove biomass for bioenergy until the final harvest (e.g.,



seedling growers to exchange ideas

sawlog) target density is reached. At another field stop, **Cathy Kubbernus** (Canfor) discussed her company's treatment methods on salvage-harvested mountain pine beetle-killed stands. The harvest method for these sites is cut-to-length at the stump with subsequent site-preparation carried out using light chain drags. The chain drags expose a little bit of mineral soil, but also leave slash on site, which helps to control competing vegetation. Smaller stock types (e.g., 211s and 310s) are planted within 6 to 18 months of harvest at a density of 1000–1100 stems per hectare, with the expectation that natural regeneration will supplement stocking.

Another key message from the conference was that “conserving seed is both economical and practical.”

Norm Livingstone (SilvaGro) and **Stephen Joyce** (BC Timber Sales) both noted that fractional seeding is a key seed conservation strategy that is also useful in minimizing wasted growing space in the greenhouse. Joyce reported that the seed conservation strategies employed during the 2008/09 fiscal year resulted in a savings of 47 kg of seed (25 million potential seedlings) with a value of approximately \$150,000.

Matthew Blanchard (Michigan State University) presented greenhouse managers with a number of ideas on how to lower greenhouse heating costs, which could result in significant savings. One of his key tips was to lower night temperatures, since 75–80% of the energy consumed is used to heat the greenhouse at night. Other tips included using energy curtains at night to reduce the volume of air being heated, infrared polyethylene plastic to reduce long wave radiation emissions, and horizontal air-flow fans to mix warm air near the roof with cool air near the floor. He also suggested visiting the website www.virtualgrower.net to download free software which, although designed for the United States, may provide additional helpful energy-saving hints.

Raul Rehler (BC Ministry of Forests and Range) summarized the discussion paper, “Growing Opportunities: A New Vision for Silviculture in British Columbia,” (www.for.gov.bc.ca/hfp/silviculture/discussion_paper/SilvicultureDiscussionPaper-FINAL.pdf) as well as comments received to date through the online forum. Some of the key comments focus on the need to retool planning in

British Columbia around Sustainable Forest Management (SFM) and to include all stakeholders, communities, and First Nations in the effort. Other suggestions included moving to an area-based tenure system, separating forest management from forest product manufacturing sectors, and ensuring that First Nations are involved in all phases of the process. Rehler also provided timelines for the next steps in the Vision implementation process.

The field tour on the second day visited the University of Northern British Columbia (UNBC) Ike Barber Enhanced Forestry Lab and Greenhouse complex and the Pacific Regeneration Technologies (PRT) Redrock nursery. Staff at both facilities presented information on their move to green energy sources. Participants toured the new bioenergy plant at UNBC, which uses wood pellets to produce the heat for the greenhouse complex. Future plans for the university include constructing a biomass gasification system, which will be used to heat the entire university and is expected to be operational by early 2011. The PRT Redrock nursery is also headed down a similar path and has begun growing willow trees for the biomass needed to heat their greenhouse complex. The willow shoots obtained from Syracuse University in New York (SUNY) were planted this past spring and will be coppiced this fall with plans for the harvest of the 6–7 shoots per rootstock expected in 3 years.

Also at the conference, **Kas Dumroese** (USDA Forest Service) spoke about seedling production in Finland and **Grant Glessing** (Tolko) gave an after-dinner presentation on teak plantation investment opportunities in Panama. A panel discussion featured **Peter Forsythe** (Huckleberry Forestry), **Crawford Young** (Spectrum Resource Group), **Jim Kusisto** (Skimikin Nursery), and **Larry Cosman** (Aveling Enterprises), who shared their thoughts on reforestation challenges and opportunities. They said that one of the major challenges facing the tree-planting sector is the current high rate of employee turnover. More rookie planters require that more time be spent on safety training, which leaves less time for planter competency training.

The Northern Silviculture Committee Winter conference usually held in January in Prince George has been cancelled for this year. 🌲