

**Interior Technical Advisory Committee
October 30, 2002
Vernon, B.C.**

The meeting was called to order at 9:10 AM.

1. *Species Committee Meetings*

Northern Interior Committee.

Tim Lee gave an overview of the committee meeting. It covered recommendations through motions, breeding program overviews, breeding activities and budgets (present and future) orchard reports, successes and setbacks. Also the seed supply forecasts and new SPU priority list was presented for discussion along with the OTIP eligibility. See attached minutes.

Southern Interior Committee.

Chris Walsh gave an overview of the committee meeting. It covered recommendations through motions breeding program overviews, breeding activities and budgets (present and future), orchard reports, successes and setbacks. Also the seed supply forecasts and new SPU priority list was presented for discussion along with the OTIP eligibility. See attached minutes.

**Motion: That the Minutes and decisions of the Species Committees be accepted as presented. Moved: Tim Lee, Seconded: Chris Walsh.
Approved**

2. 2002-3 Crop Summary

Site	Species	Orch #	Kg	GW	sdlg (millions)			
PGTIS	Pli	203	1.6	2	0.26			
Skimikin	Sx	205	86.0	16	17.00		Species	seedlings
Skimikin	Sx	206	5.0	12	1.00		Sx	297.19
Skimikin	Sx	207	40.0	11	8.00		Lw	19.54
Skimikin	Sx	208	35.0	8	11.00		Pli	18.58
Kalamalka	Sx	209	39.9	17	6.74		Pw	1.17
VSOC	Sx	211	5.0	25	0.79		Fdi	0.08
VSOC	Sx	214	725.0	20	203.00			
VSOC	Pli	218	2.0	9	0.34			
VSOC	Pli	219	20.0	11	3.40		Site	seedlings
PGTIS	Pli	220	3.6	12	0.58		VSOC	208.12
VSOC	Pli	222	3.0	10	0.51		Kalamalka	73.03
PGTIS	Pli	223	2.4	18	0.39		Skimikin	43.14
VSOC	Fdi	226	1.0	19	0.04		Riverside	5.75
PGTIS	Pli	228	7.2	17	1.17		PRT	4.12
VSOC	Fdi	231	1.0	19	0.04		PGTIS	2.40
Skimikin	Sx	301	14.0	6	2.40			
Skimikin	Sx	302	18.0	5	3.00			
Riverside	Sx	303		8	5.50			
Kalamalka	Sx	304	56.5	25	9.53			
Kalamalka	Sx	305	81.5	10	13.75			
Kalamalka	Sx	306	78.5	7	13.24			
Kalamalka	Pli	307	46.7	7	7.56			
PRT	Pli	308	13.3	6	2.03			
Riverside	Pli	310		11	0.25			
PRT	Pli	311	7.6	14	1.19			
PRT	Pli	313	6.2	15	0.90			
Kalamalka	Lw	332	55.8	5	5.86			
Kalamalka	Lw	333	130.3	9	13.68			
Kalamalka	Pw	335	23.9	Rust	0.43			
Skimikin	Pw	609	41.3	rust	0.74			
Kalamalka	Sx	620	13.2	27	2.23			

3. Breeders Reports:

Program Overviews have been prepared by the breeders and will be sent out as attachments with the minutes.

3.4. Lodgepole Pine Seed set - Joe Webber

The Lodgepole pine task force identified three factors which were the likely cause of poor seed set in the north Okanagan Lodgepole pine seed orchards. These factors include:

- poor pollen supply (primarily uptake)
- limiting culture (irrigation)
- insect predation (*Leptoglossus*)

There are now three years data and average orchard yields for the Kalamalka and PRT seed orchards (307 and 308) have ranged from lows of 8 filled seed per cone to 26 filled seed per cone. Where insect protection was provided, seed yields were substantially higher (25 filled seed per cone). The effect of irrigation on seed set is less obvious but it does have a significant effect on cone size and seed weight.

There appear not to be any problems with pollen supply, including pollen amount, pollen viability or pollen uptake. There appear, however, to be significant losses of filled seed due to insects. In 2001, this was attributed losses of about 6 and 14 filled seed per cone at Kalamalka and PRT respectively due to *Leptoglossus*. Seed yields for the year 2002 at Kalamalka are similar to values obtained in 2001 with about the same level of losses observed for *Leptoglossus* damage. Seed yield data for 2002 from PRT is not available for this meeting but will be summarized in the year-end report available by the end of December.

All data suggest that good seed yields can be expected from north Okanagan PI seed orchards. Even better yields can be expected if more stringent insect control measures are adopted. Very hot dry weather has not experienced during April/May so far. This is needed to test weather effects on pollen uptake. However, it is felt that the better irrigation measures now in place should mitigate any problems resulting from excessive heat during pollination. Whether crown cooling (misting) is necessary during very hot weather has yet to be verified. The current plan calls for continued orchard monitoring but it is felt that data collection can be restricted to one orchard with the capacity to test a hot spring if it occurs.

5. Seed Pest Management - Ward Strong

The Requirement for Research in Seed Orchard Pest Management
By Ward Strong, Ph.D.

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Research in Seed Orchard Pest Management has been crucial to our ability to meet the seed production goals of the BC Government. This research has been instrumental in clarifying the extent of damage caused by pests, developing monitoring and damage prediction methods, and testing control strategies and tactics. Research projects conducted in the Interior of BC by the Seed Orchard Pest Management group have investigated both established pests and "new" pests which have become problematic only recently.

Of the established pests, *Leptoglossus occidentalis*, the Western Conifer Seedbug, has received the most attention. Bagging studies have demonstrated that this is our #1 seed orchard pest, with potential seed losses of nearly 100%, and actual losses often exceeding 50%. We've found that nymphs on 1st-year conelets cause seed reductions in Pli and conelet abortion in Pw. Monitoring methods, threshold levels, and control tactics for this intractable pest are still under investigation. Funding for a graduate student would ensure the continuation of a high-quality research program, our best bet for addressing unresolved issues.



Other research programs include damage potential of the Pine Spittlebug; a pheromone mating disruption trial for the Pine Pitch Moth; damage assessments of Larch Adelgids and Larch Blastobasids; and development of a quantitative monitoring scheme and environmentally-friendly control methods for the Cooley Spruce Gall Adelgid. Western Gall Rust and Pine Needlecast have been investigated for the use of new fungicides; one has proven effective against needlecast.

Two new pests illustrate the utility of maintaining a research capability within the tree improvement arena. The White Pine Cone Borer, *Eucosma rescissoriana*, first became apparent in about 1998; we determined the species, flight and egg-laying periods, and damage potential. We then initiated a trial for a novel pheromone control method called Attract-and-Kill. Unfortunately this was unsuccessful, and in 2001 we sustained heavy crop losses. Research now is aimed at the most benign chemical control tactics.

The other new pest is the European Pine Shoot Moth, *Rhyacionia bouliana*. It has gone rampant at one seed orchard; we need to know why, what threat it poses to other seed orchards and plantation forests, and how to monitor and effectively control this pest. Some of these questions have been answered, and the pest is now held at satisfactory levels through a combination of methods, but much work is yet to be done.

New pests will continue to show up as our seed orchard program expands and unexpected insects make use of the orchard resource. Without the ability to respond rapidly, our seed production capability stands at risk. Continued funding for research would maintain our ability to detect, identify, and develop management protocols for new and existing pests.

6. IUFRO

It was brought to the attention of the ITAC that there will be a meeting of the General IUFRO Congress in Quebec City in 2003. The meeting discussed the benefits of sending a representative on behalf of the FGC who would present information on progress in BC.

Motion: That the ITAC endorse and recommend to the FGC that a representative of the FGC be sent to the IUFRO Forestry Congress to present a paper on Gene Resource management in be at Quebec City in 2003. Moved Jaquish, Seconded Carlson.

7. SelectSeed - Jack Woods. (Email: woods@seaside.net)

The Program Manager reviewed the structure of SelectSeed and its relationship to Forest Genetics Council. SelectSeed is run by a Board of Directors that reports to Council. This Board consists of 5 members: Reid Carter, Shane Brown-Clayton, Glen Dunsworth, Jim Burbee, and John Cuthbert.

Mission statement for SelectSeed:

"SelectSeed supports Forest Genetics Council objectives for the development of seed orchard facilities to meet the provincial demand for high quality, ecologically adapted tree seed through investments, cooperative work with FGC members and effective program management."

Activities:

- FGC program management, orchard development including:
 - Grafted 14,000 grafts at Skimikin this year.
 - 35,500 ramets orchard development underway.
- This will result in 80 ha of new orchard, representing 30% of provincial total. All current expansion needs have now been met.

8. FGC Business Update and Activities – Jack Woods, Mike Carlson.

- Last FGC meeting June 11, 2002.
- December 4th, FGC meeting.
- OTIP call, December 1 2002: Call for Proposals closes January 15, 2003.
- Budget development will occur in February.
- FGC budget meeting in early March, 2003

9. Strategic Planning Subcommittee

The Program Manager reported that at its June 2002 meeting, the Forest Genetics Council established a strategic planning subcommittee to evaluate short-term and long-term options for funding shortfalls in breeding programs and to reassess SPU rankings. Committee members are Shane Browne-Clayton, Dale Draper, Henry Benskin, Diane Medves and Jack Woods. (See attached document)

The Tree Improvement Investment Program (TIIP) model has been updated with new seed-use information with some improvements being made to the model itself. The committee also established criteria for placing seed planning units into 4 categories:

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- Full advanced-generation breeding program
- First-generation breeding program only
- Genecology program only, and
- No program.

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A method for evaluating SPUs was set up by the committee. The committee has asked Species Committees to recommend scores for the ranking criteria. It will then report out to Council at the next meeting. This information has been distributed to Species committee members in the form of a spreadsheet that can be easily filled in at species committee meetings. Provincial data will be compiled and brought to FGC as a recommendation at the December meeting.

The result of this will be to create new provincial objectives. It will help deal with Breeding Program cuts and address long-term FGC goals for Breeding. It will also provide MoF Breeding management with a clear mandate with resources to go with it.

The current rankings do not identify types of programs that are needed. SPU rankings give a reasonably objective basis for setting priorities but are more for broad guidance. Rankings and data change every year however. The difficulty with the current economic model used is that a change in assumptions can have a big impact on rankings.

The process and information in this exercise will also contribute to future FGC discussions on what are reasonable and achievable objectives. The back and forth process of seeing what is achievable and what our larger objectives should result in objectives with a strong technical basis, and programs that support program objectives. As with other exercises of this type, the results have limited value to those doing the program, but they are very useful at the level of setting priorities and defending resource needs.

Net present value (new) is based on TIIP model. It is calculated using MAI, Product Value, incremental volume over time from Tree Improvement, and use assumptions of gain.

This new ranking has three primary criteria:

- NPV (Updated)
- Breeding Program probability of success (1 to 10)
- Delivery (usually orchard) probability of success (1 to 10)

And 4 secondary criteria:

- Timber supply considerations.

- Uncertainty and risk (i.e. long term demand)
- Other opportunities (high gain from cuttings, other important traits).
- Seed Transfer information needs

Incremental and provincial rankings represent 64 SPU's and cover 95% of the Province.

Species Committees are asked to:

- Review the process.
- Suggest scores and program categories

The net result of this will be to provide the business plan with direction for investment. It is an objective procedure for rationalizing the placement of SPU's in the 4 categories in which a particular SPU belongs.

Action Item:

The Coastal TAC has been asked to reviewed and rank the criteria and have the results back to Jack Woods by November 21. This will be done by the species committees and sent in by the Chair of the committees.

10. *SelectSeed Co. role in MoF privatization.*

Jack Woods clarified the position of SelectSeed with regards to Ministry privatization of seed orchards. Because it involves such a large portion of the provincial seed supply this became an issue that FGC discussed. However Council decided that it would not involve or have SelectSeed become involved in this issue.

11. *FGC Achievement Award*

It was reported that Council has awarded Dr. John Barker with its Achievement award for all his contributions over the year.

Motion: That the Forest Genetics Council consider honoring Dr. Gyula Kiss with the FGC Achievement Award for all his work in development of the interior tree improvement program. Moved Jaquish, Seconded Carlson.

12. *Concept Budget*

Jack Woods reviewed the concept or "planning" budget for the provincial FIA program for next year. He stressed that this is a initial cut and will change as species committees OTIP, TAC's and other sub-programs provide input on priorities for the coming year.

13. *Alvin Yanchuk Results Based Code*

(Based on notes as prepared by Brian Barber on RBC progress)

The BC Government as described in their "New Era" document, has promised to streamline the Forest Practices Code to establish a workable results-based code,

with tough penalties for non-compliance. On May 1, 2002 government released a discussion paper titled a "Results-based Forest and Range Practices Regime for BC". This paper described some proposed goals, results, rules, powers and reporting requirements. Three public consultation processes were undertaken: 1. An MLA Panel; 2. Technical stakeholder consultations lead by Dr. Hoberg of UBC, and; 3. A web-based discussion forum also facilitated by Dr. Hoberg. The public consultation process concluded June 30, 2002, and reports were presented to the Minister of Forests at the end of July.

In August 2002, government directed its senior ministry officials to establish a Joint Steering Committee with industry. This steering committee was formed and has established the following working groups: Forest Stewardship, Timber Pricing, First Nations and the Results-Based Code (RBC). The RBC Working Group is co-Chaired by Larry Pedersen, Chief Forester, MoF, and Ken Higginbotham, Vice President, Forestry and Environment, CANFOR. Senior government and industry executives sit on this Working Group (WG).

The purpose of the RBC working group is to develop a mutually agreeable policy and legislative proposals for a new RBC. The terms of reference for the RBC WG are mutual recognition of government and industry's objectives. Government's include Core Review, Budget and Legislative Constraints, New Era commitments, and the 8 Code objectives described in RBC Discussion Paper. Industries are to be able to exercise their harvest rights in a timely manner and to maintain and sustain timber supply. Public, First Nations, and Stakeholder views, as provided through the consultation process as reflected in consultation reports, are also to be considered.

The RBC Working Group consists of at least 6 government/industry task teams: C&E, Systems Choice (legislative framework), Rules & Results, Transition, Silviculture, and Gene Resource Management (GRM). These groups were asked to provide progress reports to the WG by Aug.30, 2002. The teams were also expected to deliver a proposed policy and legislation by Sept. 30, 2002. These tight timelines are required to be able to draft legislation in time for a fall sitting of the legislature.

With short notice and clarification provided, a GRM task team was formed quickly in the third week of August. The team met on August 27, 2002. Stakeholders represented included: Jack Woods, FGC; Shane Browne- Clayton, FGC & Riverside, Annette Van Niejenhuis, WFP and CTAC, Dan Livingston, Weyerhaeuser and ITAC, Siroil Paquet, Forest Nursery Association of BC, and Peter Hellenius, BC Seed Dealers Association. MoF representatives were Dale Draper, Brian Barber, Leslie McAuley, Heather Rooke, Alvin Yanchuk, and John Brodie (minute taker). Shane, Dan, Dale and Brian also sit on the Silviculture Task Team (STT) to ensure consistency in addressing GRM issues germane to both teams (e.g. seed use and seed transfer).

The GRM team was able to reach consensus on objectives for all the items discussed. The groups proposed eliminating some of the existing requirements (seed dealers licences and orchard licensing) and simplifying others (select seed use and cone collection permits). The means and details to achieve several objectives are yet to be determined. Dale presented the GRMs discussions to the STT, which met the next day. The STT agreed with the GRM teams conclusions. The report was submitted to the RBC Working Group – they raised no issues or concerns.

Deliberations continue within the STT Re. Standards, C&E, reporting, and transition provisions. Discussions and conclusions reached from this group and other teams will clarify the means available to reach the GRM objectives. Another meeting is planned for November 5 2002.

14. MoF Cuts Implications and Circumvention.

- **Alvin Yanchuk, Manager Forest Genetics Section Research Branch.**

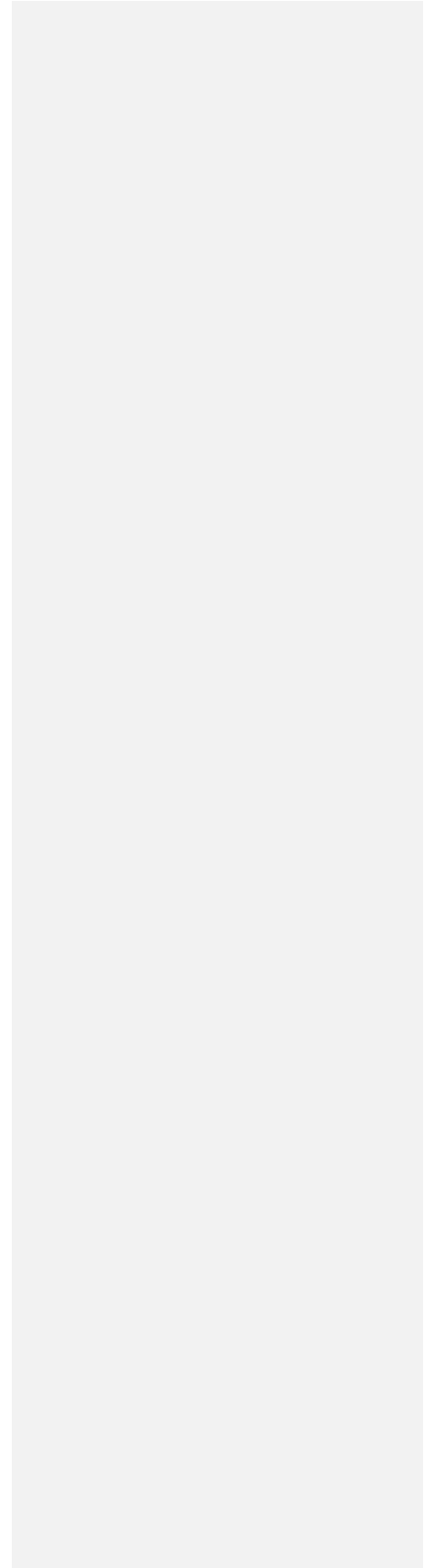
Alvin spoke of the changes that are occurring in Government and specifically on how that would affect the Research Branch. The MoF Research Branch program this year is again having to deal with staff layoffs. The Forest Genetics Section, this year, affected several employees who are now gone, and had to move several more to FIA funding. Next year (2003/2004) several more of the key tree breeding support staff will have to be moved to FIA funding, in order to deliver the same program as this year; however, there will be a shortfall of \$500,000. This is predicated on the Base budget cuts that must happen this year, while assuming that the same FIA funding and same level of program will be maintained in 2003-4. Currently there are discussions in FGC on what can be done to mitigate the shortfall. There was some discussion of what could be done to mitigate the problem by industry including using funds from the FIA Land-based program.

- **Roger Painter, Tree Improvement Coordinator, Tree Improvement Branch**

Like all other parts of government Tree Improvement Branch is in the process of a three-year program of reductions as well which will see a 35% reduction in its overall program. The main change in the program will see the ministry seed orchards being offered for lease to the private sector as part of the agreements with the successful bidders. There have been some other reductions, namely in the propagation facility at Green Timbers and other support facilities. TIB is expected see more impact in funding rather than in FTE in comparison to Research Br.

Extension Technical Advisory Committee – Don Summers (Manager, Extension Services, Tree Improvement Branch, MoF) Email: Don.Summers@gems1.gov.bc.ca

Don gave a presentation on the structure, membership, history, goals and activities and projects of the ETAC since its formation. The following page provides an overview in note form



15. ETAC – Extension Technical Advisory Committee

Chair – Chris Hawkins (hawkinsc@unbc.ca)

Members: Field Foresters, Seed Orchard Technicians, Nursery Operators, Researchers, Academics and Communications/Extension specialists

Coordination for meetings/discussion – Don Summers (don.summers@gems2.gov.bc.ca)

Contract Administration – Roger Painter (roger.painter@gems8.gov.bc.ca)

The committee has been in operation from 2000 to 2002

Accomplishments

- Reached almost 400 foresters/technicians/forest planners with information about Tree Improvement and Forest Genetics through various workshops and field tours:
 - Pollen Workshop TI extension workshops
 - Seed handling workshops Field tour to plantations on the coast.
- Published 2 comprehensive Extension notes:
 - Incorporating genetic gain in Timber Supply Analysis
 - Biotechnology: potential applications in Tree Improvement
- Assisted financially with other publications on seed and seed related subjects:
 - Seed Handling Guidebook
 - Field Guide to the Reproductive Biology of Pw
- Drafted additional publications that are under review for distribution/printing:
 - Reproductive Biology of Pw
 - Dollars and Cents in Tree Improvement
- Produced some administrative documents regarding the update of existing TI publications and developed a template for a crisis response reference (related to vandalism)
- Produced display materials on TI vs GE for the FGC conference panel
- Prepared presentation materials on TI and timber supply for TSA Committee presentations

16. Ministry Orchard Leasing

David Reid provided a brief overview of the Ministry's seed orchard leasing process currently underweigh. A Request for Proposals has been issued to a broad spectrum of industry-wide interests, effective September 4, 2002. So far the Mniistry has held initial mandatory site viewings as well as a series of secondary viewings. Bids will be accepted up until October 31,2002. The process calls for negotiations and final transfer of the orchards to the new leaseholders effective April 1, 2003. Bids will be evaluated on management and technical criteria with two evaluation teams, a financial team and technical team.

17. . Report on Operational Tree Improvement Program. Roger Painter (Tree Improvement Coordinator: email: oger.Painter@gems8.gov.bc.ca

Roger Painter reviewed the OTIP process and procedure for those present that were not familiar with the program. It was noted that there are some new faces now involved with ITAC and efforts will be made to involve them more closely with ITAC and in particularly with the Review Committee of OTIP proposals in February. Although not specifically reported to the meeting the following historical information is provided for background to the ITAC.

The results of last year's proposal review committee meetings were that there were a total of 57 proposals received for coastal SPU's with 52 being approved. A total of approximately \$843,000 was approved for coastal projects. Overall funding including interior projects was \$1.142 million spread over 80 projects. The interior is still working on solving problems related to seed-set in Lodgepole pine and a large amount is being used for that purpose. It should be noted that the program has transitioned from FRBC support to FIA intact and this is largely due to the strength of the Tree Improvement Program's priority setting process that includes the Species Committees and TAC's. The ability of the overall tree improvement community to work together has been a key factor in its overall success. No specific issues were noted during the review committee meetings that required recommendations to Council.

David Reid brought forward the topic of a need to provide a better method of support for tree seed pest management. The potential for gain in terms of seed production are large (as much as 30%) and this program needs to be better recognized with identified long term goals, priorities and resourcing. The FGC Program Manager agreed and felt that there is a need to recognize the program perhaps outside of the bounds of OTIP. He pointed out that there will be a presentation and discussion at the next FGC meeting regarding this program. Biologist Robb Bennett will be addressing Council in December on this topic.

Motion: That a task group be formed to review current and future research and operational pest management activities and that the task force report to FGC before Dec 4th. This task force should include representatives from both interior and coastal TAC's. Moved: David Reid/ Seconded: Barry

Jacquish. Approved Volunteers from the ITAC include Jack Woods, Ward Strong, Mike Carlson, Tim Lee, Barry Jacquish. Chris Walsh.

Meeting adjourned. At 1:20 PM.