



AGENDA

**9:00 am – 4:00 pm
Thursday, March 25, 2010**

Location:

Kalamalka Forestry Centre
Highway 97, 3 km south of Vernon, B.C.
(just north of Kalamalka Lake on the E side of Hwy 97)
(Jack's cell 250-715-6285)

Time	Length (min.)	#	Item	Presenter
9:00	5	1	Review of agenda	
9:05	5	2	Approval of minutes from December 16, 2009	
9:10	10	3	Old business and action items	
9:20	30	4	MFR reorganization and budget expectation	Brian
9:50	30	5	Vernon Seed Orchard Co. request regarding Pli orchards	Tim / Bruce
10:20	15	6	Chief Forester Principles – current status	Brian
10:35	15		Break	
10:50	70	7	Subprogram budgets and business planning for 2010/11 <i>(see budget table and subprogram/project descriptions)</i>	
			- FIC expectations; business-planning process	Brian / Jack
			- Genetic Conservation	Dave Kolotelo (video)
			- Tree Breeding	Barrie / Alvin
			- OTIP	Darrell
			- SelectSeed Ltd.	Jack
			- Extension	Diane Douglas
			- Seed and Cone Pest Management	Jack
			- Seed Transfer / Genecology	Lee Charleson
12:00	45		Lunch – to be provided	
12:45	45	7	Budgets - continued	Jack / Brian
			- Genetic Resource Decision Support	Brian / Lee
			- Applied Forest Genetics and Biotech (El-Kassaby)	Jack
			- Final budget allocation and recommendation	Jack
1:30	35	8	Genecology and seed transfer of western larch	Barry Jaquish
2:05	20	9	Industry orchard status and update	Kerry / Bruce
2:25	15		Break	
2:40	15	10	MFR seed prices and Seed Centre fees	Brian
2:55	15	11	Recognition award	Kerry / Brian
3:10	20	12	New business	Brian
3:30			Adjourn	

Agenda item 3 – Old Business and action items from December 16, 2009

Action items from Dec. 16, 2009 meeting

Responsibility	Action requested	Action taken
Jack	Distribute document "Chief Forester's Principles for Private and Public Seed Orchard Management in BC" to FGC and TACs for comment	Done; Comments received from 2 industry foresters
Bruce, Tim, Jack	Develop background information on Pli orchard financial viability	To be discussed under agenda item 5
Lee Charleson	Complete the Genetic Resource Decision Support report and make it available to FGC members	Not complete. Deferred until next meeting
Brian and Jack	Provide an update on budget allocations for 2010/11 when available	Not yet available; to be discussed under agenda item 4

Agenda item 4 – Update on MFR changes and budget – Brian

Substantial structural changes in the MFR will be discussed. Brian will also pass along current information regarding Forest Investment Account allocations.

Agenda item 5 – VSOC request regarding lodgepole pine orchards – Tim, Bruce, Jack

At the December 16, 2009 FGC meeting, Bruce and Tim raised the issue of support for lodgepole pine orchards. Their points were that north Okanagan Pli orchards are generally not producing enough seed to cover operating costs and, as the orchards produce for Crown lands, private operators are having difficulty justifying continued operation. FGC asked Bruce, Tim and Jack to provide further information on this issue.

The following table summarizes Pli orchards in the south and production over the last decade. Note that orchard ages differ. The measure of filled seed production, shown as kg seed per hectoliter of cones, is a good measure of orchard success. A rule of thumb is that a kg/hl of 0.2 is a break point, above which seed sales have the potential to cover orchard operating costs.

Production of Pli seed is the single largest barrier to the FGC meeting objectives for the use of select seed. Status and options will be discussed.

Summary of lodgepole pine seed orchard production in North Okanagan locations

		Date: 3/5/2010		Newly planted orchard site															
Compiled by Tim Lee - Vernon Seed Orchard		Some data from Chris Walsh		No Production															
SPU	Orch #	Location	SPU	Elevation Meters	Size Ramets	Planned prod. (Kg)	Year												Avg. yld Kg/Hi
							1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
7	307	Kal	NE	700-1600	1556		1.03	4.86	16.30	37.96	50.83	39.57	21.51	15.35	14.62	29.14	15.95	17.79	0.212
7	313	PRT	NE	700-1600	1187	8.9 Kgs				2.32	6.15	8.70	6.82	7.85	9.31	8.30	6.14	16.27	0.282
7	337	PRT/SCL	NE	700-1600	1000	7.5								0.41	0.38	2.40	1.73	5.84	0.264
7	347	Kal	NE	700-1600	2022	15.2													0
10	308	PRT	TO	700-1400	1322	10	6.91	14.11	4.62	7.25	13.29	8.40	9.07	7.34	6.13	4.75	3.79	6.85	0.209
10	311	PRT	TO	700-1400	1047	7.9			0.95	6.38	7.57	9.30	10.34	9.11	6.00	6.77	7.08	14.09	0.246
10	338	PRT/SCL	TO	700-1400	4796	36.1										1.07	2.64	24.55	0.175
10	New	Skim	TO	700-1400	4000	30.1													0
12	220	PGTIS	PG	700-1400	1600	12			4.82	4.39	3.74	3.15	5.36	15.16	8.49		23.20	14.39	
12	222	VSOC	PG	700-1400	3746	28.2	0.35	0.70	0.61	2.23	2.64	3.15	3.87	5.25	3.23	7.19	2.18		0.12
12	236	VSOC/SCL	PG	700-1400	4500	33.9										0.42	0.39	6.73	0.144
12	237	KRSO/SCL	PG	700-1400	4884	36.8												0.92	0.111
16	310	Tolko	TO	1400-1600	398	3	0.13	2.41	2.24	1.25	4.45	1.97	1.06	3.76	1.69	4.52		1.83	0.167
16	339	Tolko/SCL	TO	1400-1600	3504	26.4										2.02	2.60	11.56	0.246
17	219	VSOC	BV	700-1400	5455	41.1	1.28	2.96	5.54	10.78	17.80	17.65	15.73	22.87	17.17	19.47	7.27		0.17
17	228	PGTIS	BV	700-1400	1600	12	1.02	6.19	10.97	4.91	6.77	14.42	6.21	14.84	10.28		20.32	Waiting	
17	234	VSOC/SCL	BV	700-1400	3000	22.6										0.22	0.67	6.44	0.172
17	240	Sorr./SCL	BV	700-1400	3100	23.3												1.71	0.238
17	230	Kal	BV	700-1400	1500	11.3	9.44	13.09							8.10	30.70	20.04	Waiting	0.301
18	218	VSOC	CP	700-1300	4142	31.2					1.80	1.85	1.83	5.55	6.17	11.95	4.14	14.71	0.176
18	223	PGTIS	CP	700-1300	1000	7.5		2.54	4.75	2.99	2.72	1.67	2.85	14.13	15.98		15.55	11.25	
18	238	KRSO/SCL	CP	700-1300	3100	23.3												1.60	0.142
18	241	Sorr./SCL	PC	700-1300	2000	15.1										0.66	0.06	0.99	0.171
32	340	Kal	EK	800-1500	2383	17.9									0.02	0.66	1.14	2.52	0.178
					62,842		Average yield for fully producing southern orchards												0.199
							Prince George orchard average yield												0.415

Agenda item 6 – Chief Forester Principles regarding private and public participation in seed orchards – Brian

The “Chief Forester Principles” document was distributed to FGC and TAC members for input. Further comment was received from 2 industry foresters. Brian will discuss the status of this document.

Agenda item 7 – Budgets and business planning for 2010/11

Expectations and process:

The FIA allocation from the Forest Investment Council (FIC) for the 2010/09 fiscal year is not confirmed at this time. However, it is likely to be reduced relative to the \$5mm allocation for 2009/10.

The budget process involves the following five steps:

1. Subprogram and project committees develop business plans and budget recommendations for Council.
2. Council reviews all subprogram and project budget recommendations.
3. Council resolves shortfalls, balances among subprograms and projects, and recommends a final budget by formal resolution.

4. The FGC Program Manager forwards Council's budget recommendation to the Forest Investment Council (?) and the Provincial Chief Forester.
5. Final budget approval is given by the Deputy Minister.

Step 1 is complete. This meeting will focus on steps 2 and 3. The following summarizes subcommittee-approved budget requests, and options. As the final allocation of FIA funds is currently not known, this budget cannot be finalized. It is recommended that Council discuss options and identify how to proceed with final budget allocations when the FIA program total budget is known.

FIA Forest Genetic Conservation and Management Program				
2010/11 recommended budget by subprogram				DRAFT of March 15, 2010
FIA FGCM interim allocation =				
Subprogram	2009/10	Option 1 Requested	Option 2	Option 3
Genetic Conservation	\$396,000	\$245,100	\$230,100	\$220,100
Tree Breeding*	\$2,032,000	\$2,100,000	\$1,950,000	\$1,800,000
Operational Tree Imp. Prog.	\$747,000	\$659,661	\$652,523	\$616,328
SelectSeed Ltd.	\$710,000	\$586,000	\$556,000	\$530,000
Extension and Communication	\$101,000	\$105,500	\$100,000	\$100,000
Cone and Seed Pest Mgt.	\$360,000	\$329,700	\$305,700	\$305,700
Genecology and Seed Transfer	\$300,000	\$422,673	\$397,754	\$387,279
Genetic Resource Decision Sup.	\$40,000	\$0	\$0	\$0
Administration*	\$15,000	\$15,000	\$15,000	\$15,000
Subtotal	\$4,701,000	\$4,463,634	\$4,207,077	\$3,974,407
Incremental projects				
Research and information in support of MPB mitigation				
Cone induction/crop enhance. (von Aderkas - UVic)	\$139,000	\$0	\$0	\$0
Applied Tree Impr. and biotechnology (YE-K UBC)	\$160,000	\$180,360	\$141,480	\$141,480
Subtotal	\$299,000	\$180,360	\$141,480	\$141,480
TOTAL	\$5,000,000	\$4,643,994	\$4,348,557	\$4,115,887

Genetic Conservation Subprogram – Dave Kolotelo

Process:

The GCTAC held a conference call on March 11th, 2010 to discuss and prepare a budget recommendation (summarized below). There are three components; the UBC Centre for Forest Conservation Genetics, seed management, and MFR activities. The following subprogram budgets are recommended by the GCTAC.

Note that the Centre for Forest Conservation Genetics is leveraging projects against NSERC and other funding.

Genetic Conservation subprogram recommended budget 2010/2011		
Project	PROPOSED BUDGET 2010-11 from Genetic Conservation subprogram	Reduced budget option
CENTRE FOR FOREST CONS. GENETICS		
Climate change		
Testing climate change prediction for whitebark and lodgepole pine	\$ 20,000	\$ 20,000
Modelling seed transfer options	\$ -	\$ -
Bioclimatic envelop modelling of BEC zones and species Extreme climate variables	\$ 28,334	\$ 28,334
Genetic response to climate change (growth chamber)	\$ -	\$ -
Non-Commercial species		
Genecology of Garry oak	\$ 5,000	\$ 5,000
Populations genetics and genecology of Pacific dogwood	\$ 4,000	\$ 4,000
Ecological genetics of <i>Arbutus menziesii</i>	\$ -	\$ -
Other projects		
Cataloguing conservation status	\$ 3,000	\$ 3,000
Genetic structure and conservation of managed interior spruce populations	\$ 20,000	\$ 20,000
General CFCG expenses		
Extension	\$ 7,000	\$ 7,000
Associate Director	\$ 15,722	\$ 15,722
Office, lab and computing expenses	\$ 10,000	\$ 10,000
Total expenses	\$ 113,056	\$ 113,056
UBC Overhead 8%	\$ 9,044	\$ 9,044
Ex situ seed collections	\$ -	\$ -
TOTAL UBC CONTRIBUTION AGREEMENT	\$ 122,100	\$ 122,100
MFR Genetic Conservation Projects		
In situ conservation status of BC tree species		
Phase I: revise catalogue and gap analysis	\$ 20,000	\$ 20,000
Phase II: model verification - field sampling to confirm census numbers for species with various distributions	\$ 10,000	\$ 10,000
Phase III: update analysis and report	\$ 500	\$ 500
Implimentation of conservation strategy		
Develop guidelines for field sampling	\$ 2,000	\$ 2,000
Seed collection, extension, work with conservation agencies	\$ 35,000	\$ 30,000
Coord. with conservation groups and volunteers		
Participation with CONFORGEN	\$ 500	\$ 500
Meetings, travel, etc.	\$ 4,000	\$ 4,000
In situ climate change work with Uof A		
Analysis, database, report	\$ 10,000	\$ -
Inter situ management strategy		
Management plans to mitigate risk to inter situ sites	\$ 1,000	\$ 1,000
Salary		
0.5 FTE plus overhead in MFR	\$ 35,000	\$ 35,000
Total MFR Research Branch budget	\$ 118,000	\$ 103,000
Seed bank testing of old lots for conservation	\$ 2,000	\$ 2,000
Bigleaf Maple seed storage method development	\$ 3,000	\$ 3,000
Total MFR Tree Improvement Branch budget	\$ 5,000	\$ 5,000
TOTAL PROPOSED GENETIC CONSERVATION BUDGET	\$ 245,100	\$ 230,100

Tree Breeding – Barrie Phillips and Alvin Yanchuk

Process:

Breeding program activities and budgets are presented to Species Committees and discussed by the CTAC and ITAC. The following table outlines requests for tree breeding and associated research activities. These funds are managed through the MFR Research Branch.

Breeding program proposed budget options:

Requested amount (option 1)	
Coast (approximate)	\$ 604,000
Interior (approximate)	\$ 542,000
Salaries (Research Branch)	
\$1,100,000	
Risk managed amount	0
Total Option 1 budget request	\$2,181,000
Option 2 –primarily removes test measurements	\$1,950,000
Option 3 –removes test measurements; project scale-back	\$1,800,000

Reductions will be managed by Barrie Phillips and his staff.

Operational Tree Improvement Program (OTIP) – Darrell Wood

Process:

The OTIP call for proposals process was unchanged from previous years. This included Species Committee and TAC recommendations, a Request for Proposals, submission of projects, review of proposals by committees, and presentation of a recommended list of projects to the FGC. The budgets listed below are recommended by OTIP Review Committees.

OITP proposed budget options:

Requested amount following review committee \$ recommendations (option 1)	
Coast (approximate)	\$ 119,684
Interior (approximate)	\$ 539,977
Risk managed amount	0
Total Option 1 budget request	\$ 659,661
Option 2 –removes three low-ranked projects	\$ 652,553
Option 3 –removes test measurements; project scale-back	\$ 616,328

SelectSeed Ltd. Business Plan and budget – Jack Woods

See SelectSeed Business Plan was distributed as a separate document

Process:

SelectSeed develops and manages orchards through contracts to meet objectives set by the FGC. The SelectSeed Business Plan and the budget listed below were approved by the SelectSeed Board on March 2, 2009. Board members are Glen Dunsworth (Chair), Reid Carter, Russ Clinton, Jim Burbee, and Henry Benskin.

Projects:

See pages 11 and 12 of the Business Plan for long-term cash flow forecasts. Work includes:

- contract management of 14 seed orchards
- seed production and sales
- management services for the FGC
- meeting business and financial obligations for SelectSeed Company, and for the BC Forest Genetics Society

Budget:

A budget is presented in the following table. Options to reduce this budget are limited, as most costs are fixed by contract. Seed production and sales are highly uncertain. Reduced budget options remove FGC contingency funds and reduce capital held in reserve.

2009/10 budget by category (Table 6 from SelectSeed Business Plan with the addition of FGC contingency funds).

Category	Total projected expenses / income
Expenses	
Existing orchard development contracts and capital investments	542,500
Propagation and holding	5,000
SelectSeed management and FGC support	259,300
NSERC Industrial Chair support	55,000
Crop production / seed extraction	152,600
Contingency funds for FGC activities	30,000
Total Expenditures	1,044,400
Forecast income	
Seed sales	350,000
Interest from investments	8,000
Total Income	\$358,000
Cash carry-over from previous year	\$100,000
Total MYA support	\$586,400

Option 2: Option 1 less FGC contingency funds (\$30k) = \$ 556,000

Option 3: Option 2 with \$126,000 cash carry-over = \$ 530,000

A resolution approving the Business Plan is required to meet the terms of the SelectSeed Multi-Year Agreement

Extension – Diane Douglas

Process:

The Extension Technical Advisory Committee (ETAC) developed project lists and budget recommendations. ETAC also oversees project delivery. Work is carried out primarily by Diane Douglas (TIB) and by contractors. The projects and budget shown below are recommended by the ETAC.

Recommended Extension Subprogram projects and budget, with reduced options:

Project	Budget options	
	1	2
TICtalk	\$2,000	\$2,000
Larch field tour	\$1,000	\$0
Extension note – realized gain	\$2,000	\$2,000
Deer-resistant redcedar workshop	\$2,000	\$1,000
Extension meetings & presentations - UBC	\$500	\$500
Orchard nutrient-analysis workshops	\$1,500	\$1,000
Coastal white pine mini-conference	\$2,000	\$1,000
Seed and seedling workshops	\$3,000	\$2,000
Cone handling workshops	\$2,000	\$1,000
Conservation publications (GCTAC)	\$2,500	\$2,500
Administration, opportunities and travel	\$2,000	\$2,000
Project total	\$20,500	\$15,000
MFR salary	\$85,000	\$85,000
Total	\$105,500	\$100,000

Cone and Seed Pest Management – Jack for Robb Bennett

BACKGROUND:

- Proposals & budgets are developed by the Pest Management Technical Advisory Committee (PMTAC) and guided by PMTAC business plan priorities.
- Reviewed by PMTAC at meetings and finalized on Feb. 24, 2010

2010/11 Pest Management Subprogram budget recommendation, with reduced option.

Current Projects	option 1	option 2
1 Research lab operations (MFR)	13 700	13 700
2 <i>Dioryctria</i> coneworm reproductive behaviour (UAb)	10 500	10 500
3 <i>Leptoglossus</i> seed bug behaviour (UNBC)	8 500	8 500
4 <i>Leptoglossus</i> seed bug usage of infrared & visible light (SFU)	34 000	34 000
5 Pesticide trials in Fdi & Sx (CHAR, PMRA)	32 000	32 000
6 Interior extension operations (MFR)	25 000	18 000
New Project		
7 <i>Contarinia</i> cone midge behaviour (SFU)	33 000	16 000
Subtotal (current & new projects)	156 700	132 700
Salaries		
Bennett / Strong (MFR)	173 000	173 000
Total 2010/11 request (projects & salaries)	329 700	305 700

Seed Transfer Subprogram

The second annual call for proposals under this subprogram was released in December 2009 to address priorities recommended by the STTAC. Twenty-four proposals were submitted and reviewed by the Genecology Review Committee.

Total funding requested under the call for proposals	\$569,516	
Total funding recommended by the Review Committee	\$422,673	Option 1
Reductions through some projects not being approved and through budget reductions in approved projects.		
Removal of 1 project and reduced university	\$397,754	Option 2
Option 2 plus removal of 50% of one project	\$387,279	Option 3

Genetic Resource Decision Support – Jack

The GRDS subprogram is currently under review. No funds are requested for 2010/11.

Applied Tree Improvement and Biotechnology (UBC – El-Kassaby)

Process:

A steering committee (SC) provides guidance to the project leader (Dr. Yousry El-Kassaby), reviews plans and reports, and makes budget recommendations to the FGC. This Committee met in March 2, 2010. Budget options 1 and 2 presented here have been reviewed by the steering committee, and are recommended to Council.

The following projects are approved by the Steering Committee:

- Development of methods for estimating parental contributions in western larch and Douglas-fir orchards – ongoing projects
- Western redcedar parental contributions and selfing estimates in seed orchards
- Estimates of co-ancestry and genetic gain for rooted cuttings of yellow cedar

2010/11 budget:

Project description	Option 1	Option 2
Lw project - PhD student support – on going project	20,000	20,000
Undergrad student for DNA lab assistance (8 months)	12,000	0
2 part-time lab assistants for DNA extraction and lab work	66,000	66,000
Post-doc fellowship (part time) for Yc project	24,000	0
Chemicals and supplies	45,000	45,000
UBC overhead (8%)	13,360	10,480
TOTAL	\$180,360	\$141,480

Agenda item 9 – MFR seed prices and Seed Centre fees – Brian

The MFR is currently reviewing its seed prices and fees charged by the Provincial Seed Centre. Brian will provide an update on this review.