

Meeting Minutes

8:30 am – 12:00 pm, Wednesday, April 8, 2020

Participants

Forest Genetics Council of BC:

Annette van Niejenhuis, Bevin Wigmore, Bill Laing, Bob Johnson, Domenico Iannidinardo, Gord Chipman, Jeff Mycock, Juergen Ehling, Katherine Spencer, Keith Thomas, Mark Hay, Pat Martin, Tony Hopkin.

Guests:

Brian Barber (FGC Program Mgr), Shane Berg (OCF), Henry Benskin (SelectSeed), Stephen Joyce (FIRM), Kevin Astridge (FIRM), Darrell Wood (FIRM), and Kat Gunion (Forsite).

Proceedings

A draft agenda and meeting materials were circulated in advance via email. This quarterly general meeting of FGC was held via Skype video (for materials and presentations) and conference call (for audio). Juergen left the meeting at 9 am due to audio difficulties, and Jeff, Tony and Stephen left the meeting at 11 am, and Domenico at 12 pm, due to other commitments.

Summary of Motions:

Motion: The minutes of the FGC meeting held Dec. 11, 2019 are hereby approved. Bevin/Bob. Carried.

Motion: FGC supports the Ministry’s recommended LBIS budget allocation to the FGC programs and activities as presented. Annette/Bill. Carried.

Suggested Motion: SelectSeed’s Business Plan for 2020/21, as amended, is hereby approved. Annette/Mark. Carried.

Summary of Action Items:

Person(s)	Actions	Date
Annette and Brian	Include Orchard Safety information on the new FGC Website	June 2020
Pat or Keith	Pat or Keith to report estimated LBIS expenditures for 2019/20 and budget allocations for 2020/21 for FGC’s programs.	When confirmed
Brian and Kat Gunion	Update Forecast Seedling Needs Report and Pli seedling projections and share with FGC and TAC members	ASAP
Annette	Organize a Forecasting Seedling Needs Project presentation to coastal licensees and BCTS to improve the coastal seedling forecasts, including those for private forestlands.	May-June
Brian and Kevin	Discuss development of CBST species plans and convene the CBST Species Plan Committee.	April-May

Brian	Circulate FGC home page mock-ups to FGC members for review and selection.	ASAP
Pat, Domenico, Annette, Bob and Kat	Convene an FGC Strategic Plan Committee, supported by Brian.	April-May
FGC and Others	Forward photo and short write-ups for retiring staff and new hires, as appropriate, to Brian for honorable mentions in FGC's annual reports and newsletters.	On-going
Pat & Domenico	Write a letter on behalf of FGC thanking the authors of the recently published "Tree breeding and Silviculture" paper	April
Brian	Circulate Doodle Poll to identify suitable dates for the June AGMs.	April

1. Welcome, Intro & Agenda

There being adequate notice served and a quorum of members present, Domenico, called the meeting to order at 8:45 am. Participants and guests were confirmed. No member regrets or proxies.

New FGC Members Katherine Spencer, ITAC Chair, and Gordon Chipman, Interior Seed User (Small Licensees) were welcomed. The FLNR Operations Rep position remains vacant.

Motion: The Agenda for this meeting is hereby approved. Annette/Kat. Carried

Agenda

#	Time	Min		Topic	Presenters
1	8:30	10		Welcome, Intros and Agenda	Pat/Domenico
2	8:40	20		Safety First	All
3	9:00	10	✓	Minutes and Actions from December 11, 2019	Brian
4	9:10	10	✓	FGC Dashboard	Brian
5	9:20	60		Business Planning and Budget 2020/21	
				a. Overview	Pat M
				b. TAC Chair Reports	Kat – ITAC, Annette – CTAC, Juergen-GCTAC
				c. OITP	Darrell
				d. Est. Expenditures 2019/20 and Budget 2020/21	Keith
				e. Discussion, recommendations, next steps	All
	10:20	10		<i>Break</i>	
6	10:30	20		SelectSeed Business Plan 2020/21	Brian/Henry
7	10:50	20		Seed Needs Forecast Project	Brian/Kat G/Jeff
8	11:10	10		Extension and Communication	Brian/Annette/Juergen
#	Time	Min		Topic	Presenters
9	11:20	20		FGC Strategic Plan Outline	Pat/Domenico
10	11:40	5		News and Events	All
11	11:45	5		New Business – Fdc Paper by Issac-Renton et al	Pat
12	11:50	5		Next meeting - June	
13	11:55	5		In camera for FGC Members	

2. Safety First

Members reported on Covid-19 safety measures undertaken in seed orchards and nurseries, including separation of people and additional cleaning. AgSafe and BC Forestry Safety Council have posted Covid-19 guidelines and resources on their respective websites.

Coastal planting operation costs have increased due to worker isolation measures. Interior tree planting operations have been delayed (see letter from Chief Forester and <https://wfca.ca/> for more info).

Members are encouraged to monitor the Covid-19 situation and share best practices with each other as appropriate.

3. Minutes and Action items from FGC Meeting December 11, 2019.

The draft minutes of the FGC meeting held Dec. 11, 2019 were circulated in advance.

Motion: The minutes of the FGC meeting held Dec. 11, 2019 are hereby approved.
Bevin/Bob. Carried.

Action Items from Dec. 11, 2019:

Person(s)	Actions	Status
Pat and Annette	Follow-up with BC Forest Safety Council to identify potential partnership with AgSafe BC.	Report See Notes ¹
Brian	Follow-up with FIRM re posting OTIP Project Reports	In progress
Pat	Forward FGC nomination for ITAC Chair to Diane Nicholls	Completed
Pat and Brian	Discuss and arrange suitable recognition for departing councillors	In progress See Notes ²
Pat, Domenico and Brian	Discuss process for updating FGC's strategic plan and present options to FGC.	Item #9
Brian	Strike committee to prepare CBST-based species plans	In progress Item #7
Brian, Annette and Juergen	Continue to work on Communications Plan and Website changes	Item #8
FGC Members	Provide comments on the draft FGC Governance Report to Brian	Completed
Brian	Prepare proposed changes to FGC Bylaws, Society Bylaws and Company articles for Dec 31, 2020.	In progress
Brian	Send Doodle Poll for FGC meeting for dates in early April 2020	Completed
Brian	Invite CoAdapTree social-scientist to present findings of their research at the FGC April meeting (as per June action item).	Completed Deferred as Unavailable
Brian	ITAC meeting registration fees are waived for this year, and SelectSeed is requested to pay for expenses up to \$5000.	See Notes ³

Notes on Action Items:

¹**Safety:** Pat reported that Ministry orchards cannot access AgSafe's program as the Ministry is already a member of the BC Forest Safety Council and is SAFE certified. Safety information is frequently shared between public and private seed orchard managers.

Action: Annette and Brian to include Orchard Safety information on the new FGC Website.

²**FGC Members:** Pat presented Dan Peterson, former FLNR Operations Rep, with a gift on behalf FGC at the ITAC meeting held in Vernon on Jan 22. Photo shared with members. There have been no opportunities to thank Gernot Zemanek, former small licensee rep, and Kori Vernier, former ITAC Chair, in-person to-date and will be a challenge in the future due to Covid-19.

³**ITAC Meeting:** Brian reported the ITAC extension and business meetings, including invited speakers travel, cost \$7.8k. Sponsorships received from several organizations totaled \$3k, resulting in a net cost to SelectSeed of \$4.8k. Also, see Kat's ITAC report under item 5.

4. Dashboard

Updated FGC & SelectSeed Dashboard provided as a separate attachment. Of note, FGC objectives for average genetic gain for volume of select seed used for 2020 sowing requests is 27%, exceeding the target of 20%. However, select seed use as percent of total seed use is only 69%, which is short of FGC 75% target for 2020. CBST-based sowing requests for 2020 was also only 56% vs the 100% target set five years earlier for 2020. The use of pest resistant seed is however on-track (currently 24% with a target of 50% of select seed used by 2035). The Conservation goal has also largely been met.

These outcomes will be reported in the next annual report, which will consist of reports for the past two fiscal years 2018/19 and 2019/20; combined due to delayed completion of the former. Other FGC and SelectSeed projects and tasks are largely on-track.

5. Business Planning and Budget 2020/21

Overview – Pat Martin

In Sept 2019, FGC adopted a revised business planning process to better align with the Ministry's budget cycle. FGC sent a letter to the Provincial Chief Forester (CF) on Nov. 29 requesting Land-based investment strategy (LBIS) funding for the provincial forest genetics program be increased to \$2.6M from \$2.5M. A response from the CF was received on Dec. 19, indicating an increased allocation would be a challenge but she would endeavor to secure additional funding.

Ministry staff and others subsequently prepared project proposals and budgets for FGC's programs and presented to FGC's TACs. Keith Thomas, FIRM, compiled a recommended budget to align with an anticipated allocation of \$2.5M.

Pat indicated that no decisions have yet been made respecting LBIS funding allocations for 2020/21. Financial pressures are expected due to the Covid 19 Crisis. Pat, however, indicated BC's forest genetic program is well positioned to deliver on its proposed work should funds be made available.

TAC Chair Reports

Interior TAC – Kat Spencer

A 1.5-day ITAC extension meeting was held in Vernon on Jan 22-23. It was attended by 70 persons – an excellent turn-out due in part to the waiving of registration fees, and support from sponsors. The agenda and presentations are posted on the [ITAC Members website](#).

At the ITAC Business Meeting which followed several new ITAC members were appointed, including Scott King, former FGC member. In addition to accepting the recommended budgets, follow-up actions included adopting changed to the orchards' seed production curves, identifying volunteers for a CBST-based species plan committee, seeking clarification on ITAC's roles in reviewing new orchard applications, and identifying Comandra blister rust resistant lodgepole pine parents.

Coastal TAC - Annette

The CTAC meeting was held via Skype and conference call on April 1 in response to public health Covid-19 social distancing guidelines. This all-day virtual meeting went surprisingly well. Presentations were made by the coastal Ministry forest genetics section staff, Greg O'Neill (Climate Adaptation Research) and Sally Aitken (Co-Adaptree). Presentations will be posted on the CTAC members website. CTAC supported the proposed respective budgets. Membership: Jon Degner replaces Michael Stoehr, who plans to retire in the fall. Michael's research and leadership in the Fdc and provincial forest genetics programs were acknowledged.

Genetic Conservation TAC - Juergen

In Juergen's absence, Brian provided a report on the GCTAC's meeting held at UVic on Feb 28. This was an in-person meeting with video links to a few remote participants. Dr. Tongli Wang presented a final report on the Conservation Status of BC's Native Tree Species. A formal publication and website are in progress and will be shared upon completion. Tongli will continue work on flying BEC zones, novel climates, and species range/distribution. Updates on white bark pine conserve and rust screening efforts, and seed collections were reviewed. Several budget scenarios were discussed. The Ministry and Dr. Sally Aitken continue discussions regarding potential projects to be undertaken by the UBC Centre for Forest Conservation Genetics. New GCTAC members include Cyndi Smith, formerly with Parks Canada. Alan Vyse resigned, with thanks from the Committee.

Operational Tree Improvement Program (OTIP) - Darrell Woods

The OTIP call for proposals was issued on Dec 10, 1999 and closed on Jan 16, 2020. Fifty-seven proposals were received and reviewed by a committee of 8 persons (4 ministry, 4 private) in Vernon on Mar 3, 2020. Of the 57 proposals, 5 proposals were not recommended for funding. Funding levels for 17 projects was reduced for not meeting eligibility criteria or lack of information. Proponents will be informed of proposal review results and funding expectations soon. Contracts will subsequently be issued as soon as practical.

Est. Expenditures 2019/20 and Budget 2020/21 – Keith

Keith began by acknowledging the work and contributions of FIRM staff in helping prepare the proposed program and budget for 2020/21. Estimated LBIS expenditures for the fiscal year 2019/20 are not available at this time, but expected to be close to the \$2.5M LBIS allocation.

The following table summarizes the recommended tree breeding and resilience programs by species and projects for fiscal 2020/21, as presented at the ITAC and CTAC meetings, and also compared with their 2019 funding allocations.

2020-21 Tree Breeding and Resilience Program budget by area and species					
Area and Species	Recommended by TACs and FIRM				FIRM Allocations (April 2019)
	Tree Breeding		Resilience (CBST)	Total by Spp or Project	
	Forest Health	Value			
Interior					
Douglas-fir (interior)	\$ 3,000	\$ 179,100		\$ 182,100	\$ 125,000
Hybrid Spruce	\$ 10,000	\$ 192,200		\$ 202,200	\$ 245,000
Lodgepole Pine	\$ 87,300	164,000		\$ 251,300	\$ 317,323
Ponderosa pine	4600	\$ 62,200		\$ 66,800	\$ 33,000
Western Larch		\$ 79,800		\$ 79,800	\$ 186,000
Western redcedar (interior)	\$ -	\$ 27,100		\$ 27,100	\$ 25,000
White Pine (interior)	\$ 25,200			\$ 25,200	\$ 1,800
Interior subtotals	\$ 130,100	\$ 704,400	\$ -	\$ 834,500	\$ 933,123
Coast					
Douglas-fir (coast)	\$ 103,000	\$ 140,500		\$ 243,500	\$ 164,000
Hardwoods		\$ 56,000		\$ 56,000	\$ 65,000
Hemlock		\$ 17,000	\$ 51,000	\$ 68,000	\$ 57,000
Sitka spruce		\$ 30,000		\$ 30,000	\$ 25,000
True Firs			\$ 44,000	\$ 74,000	\$ 65,000
Western redcedar	\$ 142,250	\$ 193,250		\$ 335,500	\$ 354,000
White pine (coast)	\$ 34,000			\$ 34,000	\$ 26,000
Yellow cedar		\$ 44,000		\$ 44,000	\$ 40,000
Coast Subtotal	\$ 279,250	\$ 480,750	\$ 95,000	\$ 885,000	\$ 796,000
Province-wide					
Climate Change Adaptation			\$ 133,000	\$ 133,000	\$ 148,000
CoAdapttree			\$ 50,000	\$ 50,000	\$ 50,000
CBST Project			\$ 70,000	\$ 70,000	\$ 50,000
Province-wide subtotal			\$ 253,000	\$ 253,000	\$ 248,000
Grand Total	\$ 409,350	\$ 1,185,150	\$ 348,000	\$ 1,972,500	\$ 1,977,123
	Breeding total	\$ 1,594,500			

The following table summarizes the last year's budget allocations, and fiscal 2020/21 budget targets, requests and recommendations by FGC program:

FGC Program	2019/20 Allocation	2020/21 Target	Budget Requests 2020/21	2020/21 Recommend
Genetic Conservation	\$ 193,994	\$ 210,000	\$ 287,375	\$ 224,375
Tree Breeding (Volume & Pest Resistance)	\$ 1,521,006	\$ 1,590,000	\$ 1,594,500	\$ 1,594,500
Resilience (e.g. Climate Adaptation)	\$ 460,000	\$ 375,000	\$ 348,000	\$ 348,000
Operational Tree Improvement (OTIP)	\$ 325,000	\$ 325,000	\$ 354,746	\$ 283,937
Holdback	\$ -	\$ -	\$ -	\$ 49,188
Total	\$ 2,500,000	\$ 2,500,000	\$ 2,584,621	\$ 2,500,000

A holdback of \$49k is proposed in the event the Ministry is unable able to allocate \$2.5M. Additional funds will be directed to conservation, tree breeding and resilience projects, in consideration of feedback received at the TAC meetings, if made available.

FGC members thought the recommended budget allocations between and within programs was reasonable.

Motion: FGC supports the Ministry's recommended LBIS budget allocation to the FGC programs and activities as presented. Annette/Bill. Carried.

Action: Pat or Keith to report estimated LBIS expenditures for 2019/20 and budget allocations for 2020/21 for FGC's programs, when confirmed.

6. **SelectSeed Business Plan 2020/21**

A draft Business Plan for Select Seed Company Ltd. for 2020/21 was circulated in advance. The plan was approved by the Company's Board of Directors on March 31, 2020.

Henry Benskin, President, provided an overview of the Company's proposed activities and budget for 2020/21. Highlights include establishing a new Pli seed orchard on a property near Quesnel purchased in Feb 2020 (see [FGC Newsletter vol 1](#)). Central Interior Mapping has been contracted to help manage the property and establish the orchard.

SelectSeed will undertake a review of its partnership agreements, the majority of which expire by Dec. 2026. A brief report on report on return on investments to-date, as previous requested, will also be provided. Covid-19 impacts on expenditure and revenue forecasts will be monitored and operations adjusted as necessary.

SelectSeed will also continue to provide program management services to FGC under a long-term agreement with the Ministry. These services will be reviewed and confirmed through a shareholder agreement. The bylaws of FGC and the Society will also be updated for the June AGMs. The Company's Board of Directors and FGC co-chairs will also meet as required to review progress toward the goals set out in the CEO's annual letter of expectations.

Pat complimented SelectSeed for its robust business plan. Domenico requested an additional reference to Covid-19 in the Executive Summary.

Suggested Motion: SelectSeed's Business Plan for 2020/21, as amended, is hereby approved. Annette/Mark. Carried.

7. **Seed Needs Forecast Project**

A draft project report was provided in advance of the meeting. Details of the seed forecasts by species, BEC variants and new Pli breeding zones are can be found on the project website at: <https://arccg.is/DHOPX>.

Brian and Kat Gunion provided an update on this project, including its methods, inputs and results. Additional \$ support was received from Resource Practices Branch. Jeff lead an audit of the reforestation assumptions for management units that overlap the new CBST-based Pli "BV" zone. New information for several licensees and management units, including Tolko and the Williams Lake TSA, will be incorporated into the analysis.

The Pli seedling needs for the new “BV” zone in 10-30 years are estimated to be between 18-19M (current demand is ~50M). This number does not include any government reforestation programs or contingencies for wildfires (e.g. S. 108). Brian provided the following table that estimates the number of orchard ramets required to produce 20-25 Million seedlings, based on a range of seedlings per ramet (at maturity).

# Seedlings Required	Est. Seedlings per Ramet		
	1,400	1,600	1,800
20 M	14,286	12,500	11,111
23 M	16,429	14,375	12,778
25 M	17,857	15,625	13,889

The 15,000 Pli ramets to be selected and grafted by the Ministry over the next three years for three orchards to be established by the Ministry (PGTIS), VSOC (Quesnel) and SelectSeed (Quesnel), 5000 ramets each respectively, appear to be sufficient to meet future Pli seed needs for this zone.

The forecasts will be refined over the next year, and used to inform CBST species plans, and tree breeding and seed orchard priorities over the next decade. The analysis will be run again in 3-5 years.

Action: Brian and Kat Gunion to update Forecast Seedling Needs Report and Pli seedling projections and share with FGC and TAC members.

Action: Annette to help organize and deliver a Forecasting Seedling Needs Project presentation to coastal licensees and BCTS to improve the coastal seedling forecasts, including those for private forestlands.

Action: Brian and Kevin to discuss development of CBST species plans and convene the CBST Species Plan Committee in late April to May.

8. Extension and Communication

Caroda Web Solutions, FGC’s new webmaster and graphic designer, assisted with launch of a new [FGC Newsletter. Vol. 1 No. 1. - Jan. 10, 2020](#) and a subscription-based email distribution list. A new FGC website is also under development. Annette, Juergen and Brian have provided Caorda with an outline. A few mock-ups of a new FGC home page were shared briefly.

Action: Brian to circulate FGC home page mock-ups for review and selection.

9. FGC Strategic Plan 2020-2025 Draft Outline

Pat, Domenico and Brian met in February to discuss an outline and approach for a new FGC strategic plan for the period 2020-25. A draft outline was circulated in advance for review and discussion.

A committee will be struck to advance and provide recommendation with a view to provide draft for the Provincial Chief Forester’s consideration in Dec. 2020. Henry offered input on behalf of SelectSeed’s Board of Directors. Volunteers were solicited.

Action: Pat, Domenico, Annette, Bob and Kat to convene an FGC Strategic Plan Committee, supported by Brian.

10. News and Events

Covid-19 has resulted in cancellation and postponement of many forestry-related meetings and events. BC Seed Orchard Association meeting scheduled for June 2020 has been postponed.

The North American Forest Genetics Society inaugural meeting scheduled for June 2020 has also been cancelled. Discussions are underway with the Canadian Forest Genetics Society (Brian Chairman) and Western Forest Genetics Association (Nick Ukrainetz, President), who propose to hold a joint meeting in the Okanagan in summer 2021. A local host committee has already been struck. Date and venue to be confirmed in the weeks ahead.

Gary Giampa, Seed Orchard Supervisor, Ministry's Kalamalka and Bailey Road Seed Orchards, and Kathy Cook, WFP Seed Orchards recently retired.

Action: FGC and others to forward Brian photo and short write-ups for retiring staff and new hires, as appropriate, for honorable mentions in FGC's annual reports and newsletters.

11. New Business

Pat circulated a paper "Tree breeding and silviculture: Douglas-fir volume gains with minimal wood quality loss under variable planting densities" by Miriam Isaac-Renton, Michael Stoehr, Catherine Bealle Statland, and Jack Woods recently published in Forest Ecology and Management, Volume 465, 1 June 2020, 118094. See [Link](#).

This paper demonstrates the estimated volume gains from the Fdc breeding program (and Fdc Class A seedlots) are being realized (or exceeded) with minimal impact on wood quality. The paper helps to maintain the credibility and high scientific standards of BC's collaborative tree improvement program.

Action: Pat and Domenico to write a letter on behalf of FGC thanking the authors of the recently published "Tree breeding and Silviculture" paper.

12. Next meetings

Next meeting will be held in conjunction with AGMs for the BC Forest Genetics Society and SelectSeed. These meetings are typically held in June following completion of the company's audited financial statements and annual report for the previous fiscal year.

Action: Brian to circulate Doodle Poll to identify suitable dates for the June AGMs.

13. In camera session

Guests were asked to leave during this portion of the meeting.

Motion: Move to meeting *in camera* for FGC members only. Pat/Bill. Carried.

14. Adjourn

Motion: The in camera session is closed and the meeting is hereby adjourned at 12:12 pm. Bob/Annette. Carried

Draft minutes prepared by B Barber, April 22, 2020

Approved by FGC on June 17, 2020