

General Meeting

9:00 am – 12:00 pm, Thursday, December 10, 2020

Proceedings

This meeting was held via GoTo video meeting. Agenda and attachments were posted on [FGC's Secure Access website](#).

Participants

Forest Genetics Council of BC:

Annette van Niejenhuis, Bevin Wigmore, Bob Johnson, Caitlin Harrison, Dan Mazerolle, Domenico Iannidinaro (Co-Chair), Gord Chipman, Jeff Mycock, Juergen Ehltng, Katherine Spencer, Keith Thomas, Pat Martin (Co-Chair). **Regrets** (proxy): Bill Laing (Jeff).

Guests:

Brian Barber (FGC Program Mgr), Shane Berg (OCF), Stephen Joyce (FIRM), Rahul Singh (Genome BC).

Summary of Motions:

Motion: The minutes of the FGC meeting held Oct 2, 2020 are hereby approved as amended. Annette/Bob. Carried.

Summary of Actions:

Person(s)	Actions	Date
Annette, Kat, Brian	Discuss sharing of safety-related information in advance of TAC meetings	January
Pat	Provide draft 1-pager on process for obtaining a new orchard with new material.	January
Pat	Draft a terms of reference for a cone processing 'task team 'and circulate to FGC Members for input, and to nominate/identify a chair and team members.	January
Members	Comments on the Draft 2021-2025 FGC Strategic Plan to Brian.	Dec 31, 2020
Pat	Send out notice to orchard managers re OTIP Call for Proposals	ASAP
Pat	Provide further instructions for 2021/22 business planning to TACs in advance of their respective meetings.	Jan
Brian	Work with Co-Chairs to provide FGC's budget recommendations to the Chief Forester and select Ministry Executive.	Jan-Feb
Members	Send news and announcements for next FGC Xmas eNewsletter to Brian.	ASAP

1. Welcome, Intro & Agenda

There being adequate notice served and a quorum of members present, Domenico called the meeting to order at 9:05 am, welcomed participants and guests, confirmed regrets and proxies, and confirmed the agenda. Caitlin and Dan were welcomed as new FGC Members.

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

Agenda

#	Time	Min		Topic	Presenters
1	9:00	3		Welcome, Intros and Agenda	Pat/Domenico
2	9:03	2		FGC Membership	Pat/Brian
3	9:05	5	A	Minutes and Actions from Oct 2, 2020	Brian
4	9:10	10		Safety Updates	All
5	9:20	10		Government Updates	Shane Berg
6	9:30	10	B	FGC Dashboard	Brian
7	9:40	5		SelectSeed Orchard Strategy Update	Brian
8	9:45	5		Preview of 2018-2020 Biennial Report	Brian
9	9:50	10	C	Breeding Program Update	Keith
10	10:00	15		CBST Species Plan Project Update and Demo	Brian
11	10:15	15		2020 Cone Crop and Seed Processing	Brian/Jeff
	10:30	15		<i>Break</i>	
12	10:45	20	D	Draft FGC Strategic Plan 2021-2025	Pat/Domenico/Brian
13	11:05	20	E	Business Planning for 2021/22	Pat
14	11:25	10		News and Announcements	All
15	11:35	5		Next Meeting	Brian
16	11:40	10		In Camera Session	Pat/Domenico

2. Minutes and Action items from October 2, 2020.

FGC's Oct 2, 2020 meeting was held via video conference. Draft minutes in Attachment A.

Motion: The minutes of the FGC meeting held Oct 2, 2020 are hereby approved as amended. Annette/Bob. Carried.

Action Items from October 2, 2020:

Person(s)	Actions	Status
Annette, Kat & Brian	ITAC and CTAC to share safety-related information at their respective meetings, and post important documents and links on the new FGC website.	In progress Follow-up prior to TAC mtgs
Pat and Keith	Propose a business planning process for prioritizing 2021/22 LBIS funding allocations to FGC programs.	See item #13

Brian	Connect with the strategic plan groups, compile comments and recommendations, and convene a meeting of the subcommittee to review by Nov 15.	See item #12
Strategic Plan Subcommittee	Prepare draft plan for FGC's Dec. 10 Meeting	See item #12
Mark	Confirm BCTS's nomination for FGC to Pat, Dom and Brian	Completed See item #3
Pat	Prepare (re)appointment letters to the Chief Forester for the CTAC, CFS and BCTS positions.	Completed See item #3
Brian	Send out Meeting invite for Dec 10 FGC meeting and include technical presentation in agenda.	Completed

3. FGC Membership

On Oct 30, 2020, Diane Nicholls, Provincial Chief Forester, appointed **Caitlin Harrison**, Seed and Seedling Planning Officer, BC Timber Sales, to replace **Mark Hay**, as BCTS's rep. **Dan Mazerolle**, Director, Strategic Operations, Canadian Wood Fibre Centre, was appointed to replace **Tony Hopkins**, as rep for Natural Resources Canada. Pat Martin, as President of the BC Forest Genetics Society, subsequently accepted their membership applications to the Society. Welcome Caitlin and Dan!

Annette van Niejenhuis was also reappointed for another 3-year term as Coastal TAC Chair. **Keith Thomas** was also reappointed for another 3-year term, as the Ministry's Research Rep, following confirmation of his appointment as Manager, Forest Genetics Section, FIRM. Congratulations Annette and Keith!

4. Safety Updates

Members were invited to report on Covid 19 and other safety-related initiatives within the purview of FGC. Brian reported that Rick Hansinger, who operates SelectSeed's Kirogn Pruning Equipment, developed standard operating/safety procedures prior to commencing work at several SelectSeed partner sites this fall. The plans were reviewed with site supervisors in advance of commencing pruning operations. Mosaic continues its safety and operational evaluate of elevator platforms used for picking cones.

5. Government Updates

Shane Berg, Deputy Chief Forester, provided an update on the [Mandate letters](#), of the Hon. **Katrine Conroy**, Minister of Forests, Lands, Natural Resource Operations and Rural Development Hon. **Nathan Cullen**, Minister of State for Lands and Natural Resource Operations, and **Roly Russell**, MLA, Parliamentary Secretary for Rural Development. Highlights include reorganization of FLNRORD, old-growth strategy, and "planting more trees". Details will be provided in the weeks ahead.

Shane and Dan also summarized Federal government's 2 billion tree program, a \$1.3 billion commitment over 10 years for afforestation, reforestation (on non-obligation, disturbed areas) and rural and urban tree planting across Canada. BC has planted millions of trees with funding provided under the Low Carbon Initiative Fund, an agreement which has been extended to 2024. It will be a challenge to find sufficient areas and capacity to plant additional trees under the Fed's new program. Details to be provided.

6. FGC Dashboard

An updated Dashboard that includes FGC's & SelectSeed's objectives and projects was provided as Attachment B. The average genetic worth for volume (GVO) was previously reported as 27%, whose calculation included pest-resistant measures. Avg. GVO for 2020 sowing requests was only 21%, which still surpasses the 2020 target of 20%. Pat noted changes to SPAR are being made to accommodate multiple traits and values associated with orchard seedlots.

A few FGC projects remain in the *Yellow*, but most of SelectSeed's projects remain in the *Green*. Domenico acknowledged the usefulness of the Dashboard to keeping track of projects and initiatives.

On Dec 3. Pat and Domenico met with Henry Benskin and Brian to discuss projects' status and workload. Brian proposed hiring a part-time staff or contractor to provide administrative support to FGC and its TACs, and to advance initiatives such as the Communication Plan. Pat acknowledge these challenge and asked FGC to be mindful of adding additional workload.

7. Select Seed Orchard Replacement Strategy Update

Brian provided a brief update on progress towards the Company's orchard replacement strategy. An analysis of future seed needs on an orchard-by-orchard case basis will be undertaken prior to engaging partners. A review of the breeding program timelines may also identify some new opportunities. A more detailed report will be provided at the next meeting.

8. FGC Biennial Report

Brian provided an overview of the draft 2018-20 Biennial Report. Publication of this two-year report was further delayed but is nearing completion. Brian will send contents to the graphic designer soon, and provide to Pat and Domenico for review and approval, prior to sending to CF.

9. Breeding Program Updates

Keith Thomas provided an overview of the Ministry's breeding plan timelines for each major commercial tree species, including years for field data collection and release of materials to seed orchards. See Attachment C.

The timely provision of new data soon after field measurements and analysis was identified as very important to seed orchard managers for planning purposes. The breeding plan schedules will be reviewed at the upcoming ITAC and CTAC meetings, and updated and refined accordingly.

Pat also indicated Ministry guidelines for allocating genetics materials for new orchards will be provided soon – and in response to ITAC’s request to clarify the decision-making process and its role in it.

Action: Pat to provide draft 1-pager on process for obtaining a new orchard with new material in Jan.

10. CBST Species Plan Project Update and Demo

Brian provided an overview of the new on-line CBST-based Species Plan dashboard developed by the project team and Forsite Consulting. The dashboard currently only includes Fdc and Fdi, and their orchards, seed production forecasts and future seedling needs by BEC variant. Other features of the previous hardcopy species plans have been or will be included.

The dashboard is currently being updated with input from the Advisory Team. The next version will be reviewed at the upcoming TAC meetings and by SPAR clients. Members are welcome to review the dashboard and provide comments/suggestions to Brian.

Brian forwarded the Project’s Terms of Reference, previously shared with FGC on Oct 2, and links to the dashboard website and project’s ftp.

Coffee Break

Domenico departed the meeting at the break and Pat assumed role of Chair.

11. 2020 Orchard Cone Crop and Seed Processing

The following table includes updated statistics for the 2020 cone crop for orchard and wild seed seedlots as provided by the Tree Seed Centre on Dec 7.

2020 Seed Orchard Crop Estimates - Dec 7, 2020						
Species Code	Species Names	Hecolitres (hl)	Avg. Yield (kg/hl)	Est. Yield (kg)	Avg. Seedlings per kg (000s)	Total Potential Seedlings (000s)
Cw	Western redcedar	11	0.564	6	268.4	1,627
Fdc	Coastal Douglas-fir	1,165	0.339	395	39.1	15,437
Fdi	Interior Douglas-fir	861	0.673	579	41.6	24,099
Pli	Lodgepole pine	917	0.264	242	124.5	30,140
Lw	Western larch	401	0.754	303	70.7	21,387
Sx	Interior spruce	1,253	0.86	1,077	141.8	152,758
Dr	Red Alder	3	1.005	3	795.9	2,160
Pw	Interior white pine	152	0.371	56	19.1	1,075
Pwc	Coastal white pine	36	0.371	13	19.1	255
Py	Ponderosa pine	64	0.743	48	4.7	225
Seed Orchard Total		4,862		2,722		249,163
Fdi - B	Wild Interior Douglas-	243	1.077	262	44.7	11,718
Py - B	Wild Ponderosa	132	1.81	238	7.5	1,786
Pli - B	Wild lodgepole	12	0.278	3	150.4	518
Wild total		387		500		14,023
Grand Total		5,249		3,223		263,186

On Oct 2., the orchard crop was reported to be 4.651 hl, wild crops 235 hl, and a grand total of 4,886. The increase to 5,249 hl is largely attributed to larger Fd crops in coastal orchards and from wild stands. The orchard crop consisted of 65 seedlots, 25 of which were priority processed in accordance with the Tree Seed Centre’s June 2020 [priority processing guidelines](#).

Jeff identified several challenges associated with cone processing observed over the past few years, including delays in shipping, processing, registration and subsequently seed sales; higher costs, risks and liability of cone remaining in interim-storage longer, and communications processing and registration status.

Bev, Annette, Brian and Gord also identified similar issues encountered with orchard and wild seedlot collections. Delays are attributed in part to larger crops and the loss of private sector cone processing facilities. A subcommittee was proposed to clarify the issues, identify some solutions and make recommendations to improve the process.

Action: Pat to draft a terms of reference for a cone processing ‘task team,’ share draft with FGC Members for input, and nominate/identify a chair and team members.

12. Draft FGC Strategic Plan 2020-2025

On Nov. 20, the Strategic Plan Committee met to review a draft plan prepared by Brian. Comments and edits were offered. See Attachment D for the latest draft.

The plan requires additional work, improving the business case for funding. Members were invited for comments and improvements prior to finalizing early in the new year.

Action: Members to provide comments on Draft 2021-2025 FGC Strategic Plan to Brian by Dec 31, 2020.

13. Business Planning and Budget 2020/21

Pat reviewed his Oct 29 proposed “Game Plan” (Attachment E1) for two potential LBIS funding levels for 2021/22: \$2.5M and \$2.0M. The following preliminary budget (E2) was also offered for review and comment.

Table 1. Budget breakdown for the 2021/22 LBIS-funded tree improvement program.

Program	Activities planned for 2021/22	Amount (\$)
Breeding - coastal	Western redcedar (Cw) <ul style="list-style-type: none"> • 10-year measurement of 2nd generation Cw deer trials (4 sites) and 2nd generation families from Px1-4 volume selections (2 sites). • 5-year measurement of 2nd generation Cw clones selected from Px1-4 volume families and selected for high foliar terpenes (4 sites). 	337,000
	Douglas-fir (Fdc) <ul style="list-style-type: none"> • Plant a new series of 2nd generation subarctic/high-elevation coastal trials (6 sites total). • Release 50 3rd generation selections. • Release drought and SNC BVs for some 2nd gen selections. 	243,000

	Other species (coastal) <ul style="list-style-type: none"> • Cy - 20 year measurement on Misty and Woss provenance sites. Data will support updating Yc transfer functions for CBST <ul style="list-style-type: none"> ○ 20 year measurement on Champion (interior, near Castlegar) Yc provenance site. This will provide valuable information on coastal Yc performance in interior conditions. • Mb/Dr- Graft and set 2/3 of the Mb clone bank/hedge orchard at CLRS <ul style="list-style-type: none"> ○ Seed transfer functions for Dr from the Phase III, Series I set of trials. • Pw - Maintain and assess all F1 field sites in preparation for establishing a new orchard at Cobble Hill. 	255,000
Breeding - interior	Douglas-fir (Fdi) <ul style="list-style-type: none"> • Plant new second-cycle tests for the NEH/QL breeding population • Add data for wood quality (acoustic velocity). 	208,000
	Interior spruce (Sx) <ul style="list-style-type: none"> • Maintenance and measurements on key progeny tests and realized gain trials (PG and NE low). 	171,000
	Lodgepole pine (PI) <ul style="list-style-type: none"> • Establish a new set of field trials to screen for comandra resistance • Add extra trait info for wood quality and disease resistance from existing field sites. 	258,000
	Western larch (Lw) <ul style="list-style-type: none"> • Maintenance at progeny test (EK) and clone banks 	19,000
	Other species (interior) <ul style="list-style-type: none"> • Pwi - Measure progeny tests for bister rust and growth <ul style="list-style-type: none"> ○ Establish a new set of progeny tests to screen for blister rust resistance and assess growth • Py - Complete the drought screening trial and make recommendations on how to proceed with drought screening <ul style="list-style-type: none"> ○ Add trees from BC and US orchards to our breeding program • Cwi - Breeding for future progeny tests <ul style="list-style-type: none"> ○ Maintenance and measurement of key provenance and progeny tests in the interior. 	161,000
Resilience	Genecology <ul style="list-style-type: none"> • Maintain 24 AMAT installations and measure 13. 	148,000
	CBST support <ul style="list-style-type: none"> • Spatial analysis of seed supply, demand, and deployment to support transition to Climate based seed transfer and updates to policy. 	65,000
OTIP	Technical <ul style="list-style-type: none"> • Conduct trials and studies to improve orchard management practices 	50,000
	Operational <ul style="list-style-type: none"> • Implement orchard treatments to increase the yield and quality of tree seed 	300,000
Conservation	Genetic conservation <ul style="list-style-type: none"> • Undertake ex-situ collections. Screen Whitebark pine for rust resistance. UBC Center For Forest Conservation Genetics. 	200,000
	Tongli Wang <ul style="list-style-type: none"> • Maintain/enhance the Conservation catalogue, ClimateBC, etc 	85,000
Grand Total		2,500,000

The Ministry will issue an OTIP Call for Proposals for only technical projects soon. Subject to available funding, an additional call for orchard improvement projects may be issued in the new year. This strategy is intended to protect funding for tree breeding, but the direct and indirect benefits (i.e. information sharing) of OTIP are acknowledged.

TACs will be asked to recommend projects and priorities for two-levels of funding. It was recommended FGC's budget recommendation letter to the Ministry include linkages to the Ministry's and FGC higher level objectives as project descriptions themselves do not necessarily convey their relevance and benefits.

Action: Pat to send out notice to orchard managers re OTIP Call for Proposals ASAP

Action: Pat to provide further instructions for 2021/22 business planning to TACs in advance of their respective meetings.

Action: Brian to work with Co-Chairs to provide FGC's budget recommendations to the Chief Forester and select Ministry Executive in Jan-Feb.

14. News and Announcements

Keith reported the retirements recent of Dr. Michael Stoehr and Ward Strong. The Ministry is currently hiring two new forest health specialist positions at Cowichan and Vernon.

The ITAC business meeting will be held on Jan 21. Format for the annual ITAC extension meeting, tentatively scheduled for Jan 20, is currently under review. No dates have been set for the next GCTAC and CTAC meetings.

Action: Members to send news or announcements for next FGC Xmas eNewsletter to Brian ASAP

15. Next meeting

The next meeting of FGC will be held in March or early April, pending budget process and TAC meetings. A date will be determined in January or February.

16. In camera session

In camera session for FGC members only. Guests will be asked to leave at this time.

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

17. Adjournment

Motion: The meeting is moved out of camera and adjourned at 12:15. Annette/Bob

Draft minutes by B. Barber, Dec 10, 2020.

Approved by FGC on April 16, 2021