

SPU # 43	Interior Douglas-fir	Cariboo Transition	600 - 1400m
Breeding and Orchard Production			Seedling need (million): 1.3
Adjusted for new Parent Tree Area of use. Previously 600-1300m			filename: 43 Fdi CT low Sept 2017.xlsx
Program category: First-generation			

STRATEGY Parent-tree selection from wild stands in the CT zone. Open-pollinated progeny tests of selected parents. Focus on stem volume while maintaining wood density. Best parents based on progeny-test performance selected for seed orchards.

TRAITS	Primary:	Stem volume	Secondary:	Wood density
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TESTING AND PRODUCTION	Production Year (July 1 to June 30) -- (Cone harvest year shown)																			
	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36

Parents in progeny test:

Open pollin.	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	222
Polycross																				
Clonal																				
F1																				
F2																				
F3																				

Production forecast (million plantables)

Orchards (#, owner)																				
231 VSOC (Vernon)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.2	0.5	0.6	0.7	0.7	0.7	0.7	0.7

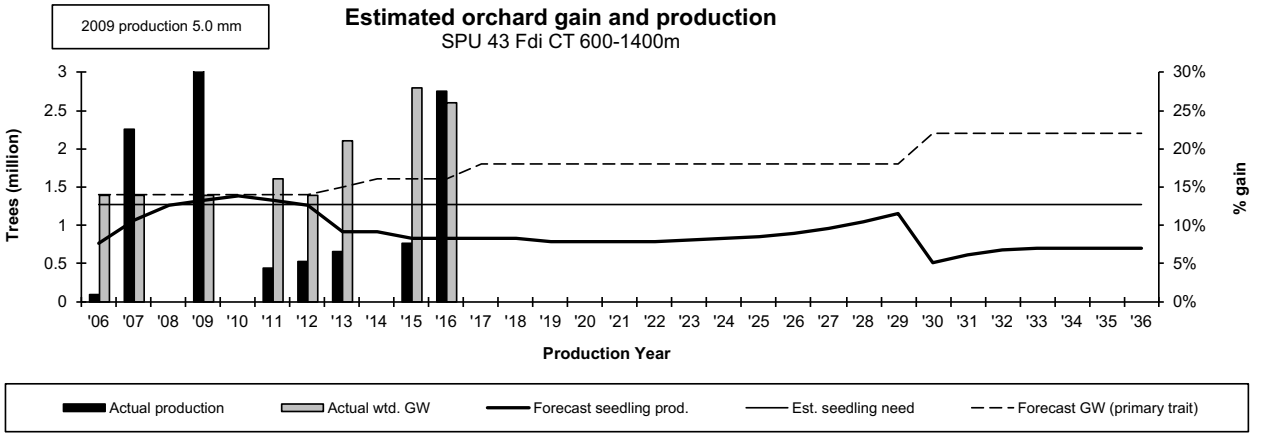
Vegetative prod.:
Phase 1
Phase 2

Estimated gain in primary trait

Orchards (#, owner)																				
231 VSOC (Vernon)	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	22%	22%	22%	22%	22%	22%	22%

Vegetative prod.:
Phase 1
Phase 2

Total Production	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.2	0.5	0.6	0.7	0.7	0.7	0.7	0.7
Total gain	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	22%	22%	22%	22%	22%	22%	22%



The above forecasts are based on orchard status, seed inventories and seed use as of June, the year of publication, and are subject to change. Refer to the seed Planning and Registry System (SPAR) or contact the orchard manager for current seed inventories. Contact the Forest Improvement and Research Mgt. Branch, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, to confirm data if used for silviculture or timber-supply planning.

Interior Douglas-fir Cariboo Transition 600 - 1400m
Conservation -- Seed Orchards -- Seedling Use

SPU #43

GENETIC CONSERVATION STATUS

Conservation statistics			
	Seed planning unit (SPU) area	1,057,140	ha
	Area protected within SPU	10,750	ha
	Percentage of SPU area protected	1%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data		0	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data		4	
Conservation status			
Current in-situ protection status: Acceptable			
Probability of maintaining > 3 protected areas with adequate population size given natural disturbance regimes: Uncertain			
For further information visit http://www.genetics.forestry.ubc.ca/cfgc/			

ORCHARD STATUS

Orchard location	Orchard number	Number of parents	Mean BV	# of ramets currently established	# of ramets planned for final orchard size	Target Seed production kg/y at maturity	Total Seedling Prod. million seedlings
VSOC (Vernon)	231	31	18%	576	1,000	29.8	1.46
Total ramets				576	1,000	Total production	1.46
Vegetative propagation						Stecklings/Emblings	0.0
						Total production	1.5

Seed and Nursery Factors

Expected annual average seedling production per ramet =	1,457
Seed weight (seeds/gram) =	93
Seedling recovery factor (seedlings/seed) =	0.53
Seedling recovery factor (seeds/seedling) =	1.90

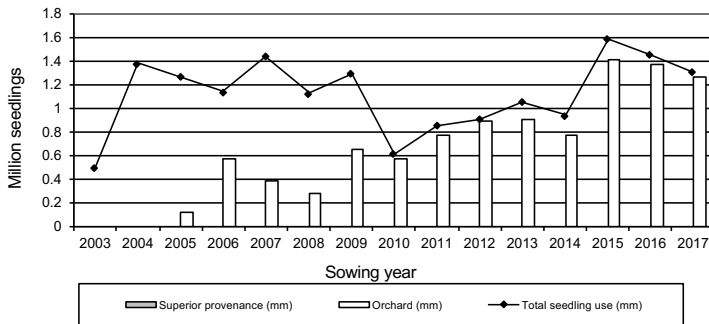
Estimate of Required Orchard Capacity

Annual planting (million seedlings)	1.3
Planned over-production factor	1.3
Ramets required	872
Ramets required with over-capacity	1,134
Projected necessary expansion	134

SEEDLING USE AND SEED IN STORAGE

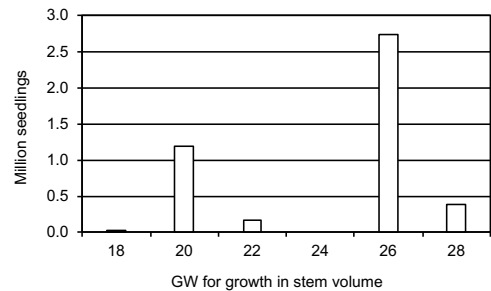
5-year average seedling requests to SPAR (2013 - 2017) 1.3 million
Estimated years of class-A seed in storage 3.5 years

Seedling Use Trend - 2003 to 2017



Notes:
- Seedling use data include 1/2 of adjacent overlap zones, where applicable
- Sowing year: Aug 1 to July 31 (i.e. 2017 sowing year starts Aug 1, 2017)

Seed in Storage by GW class



Notes:
- "Reserve" and "Available" seed in the Seed Planning and Registry System (SPAR) are included.
- Class A = seed orchard; Class B+ = superior provenance; Class B = wild stand seed.
- Genetic Wroth (GW) for growth means the projected additional wood volume available at rotation compared to using Class B seed.

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