

<b>SPU # 31</b>	<b>Coastal Douglas-fir</b>	<b>Maritime</b>	<b>900 - 1200m</b>
<b>Breeding and orchard production</b>			
Adjusted for new Parent Tree Area of use. Previously 700-1200m			<b>Seedling need (million): 0.2</b>
<b>Program category: First-generation</b>			
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**STRATEGY** Polycross testing of parents selected in wild stands, including some parents from < 700m that perform well in lower elevation progeny tests. The top 30 parents will be established in a seed orchard. No second generation testing planned.

<b>TRAITS</b>	<b>Primary:</b>	<b>Stem volume</b>										<b>Secondary:</b>	<b>Wood density, stem form</b>							
<b>TESTING AND PRODUCTION</b>	<b>Production Year (July 1 to June 30) -- (Cone harvest year shown)</b>																			
	'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.																				
Polycross	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	56
Clonal																				
F1																				
F2																				
F3																				

**Production forecast (million plantables)**

<b>Orchards (#, owner)</b>																				
116 CanFor (Sechelt)																				
406 WFP (SFC)	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

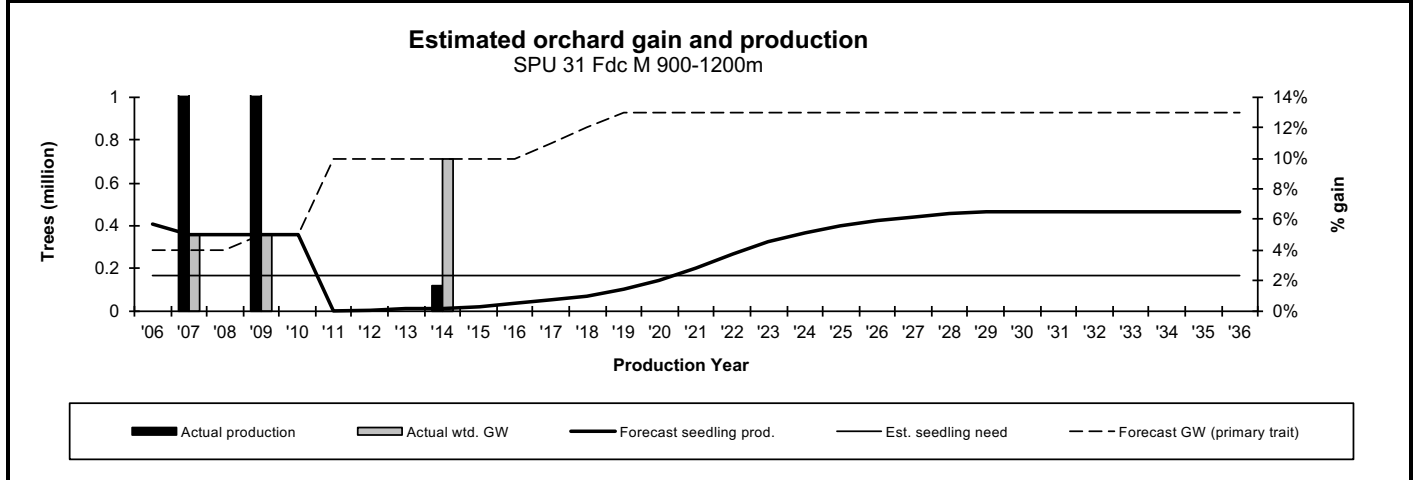
Vegetative prod.:  
**Phase 1**  
**Phase 2**  
 Estimated gain in primary trait

**Orchards**

116 CanFor (Sechelt)																				
406 WFP (SFC)	11%	12%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%

Vegetative prod.:  
 Phase 1  
 Phase 2

<b>Total Production</b>	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Total gain</b>	11%	12%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%



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.

**Coastal Douglas-fir Maritime 900 - 1200m**  
 Conservation -- Seed Orchards -- Seedling Use

**SPU #31**

**GENETIC CONSERVATION STATUS**

**Conservation statistics**

Seed planning unit (SPU) area	1,907,957	ha
Area protected within SPU	248,757	ha
Percentage of SPU area protected	13%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	>4	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	24	

**Conservation status**

Current in-situ protection status: **Very well protected**  
 Probability of maintaining > 3 protected areas with adequate population size given natural disturbance regimes: **Very high**

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	Target seedling production (mm/yr) at full production
WFP (SFC)	406	21	13%	229	240	10.8	0.50
<b>Total ramets</b>				<b>229</b>	<b>240</b>	<b>Total production</b>	<b>0.50</b>
Vegetative propagation						<b>Stecklings/Emblings</b>	<b>0.0</b>
						<b>Total production</b>	<b>0.5</b>

**Seed and Nursery Factors**

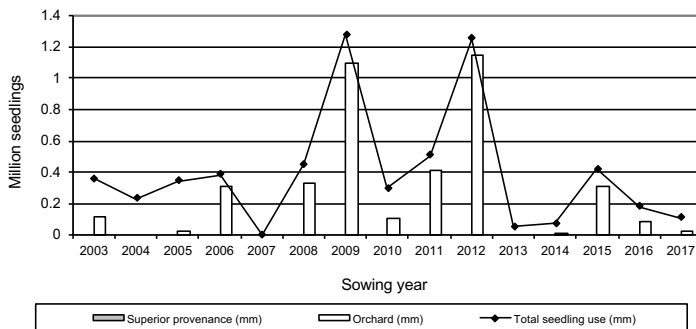
**Estimate of Required Orchard Capacity**

<b>Expected annual average seedling production per ramet = 2,068</b>	<b>Annual planting (million seedlings)</b>	<b>0.2</b>
Seed weight (seeds/gram) = 87	Planned over-production factor	<b>1.3</b>
Seedling recovery factor (seedlings/seed) = 0.53	Ramets required	<b>81</b>
Seedling recovery factor (seeds/seedling) = 1.90	Ramets required with over-capacity	<b>105</b>
	Projected necessary expansion	<b>0</b>

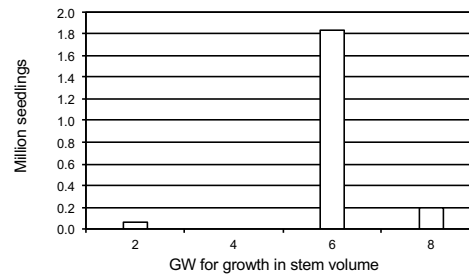
**SEEDLING USE AND SEED IN STORAGE**

**5-year average seedling requests to SPAR (2013 - 2017) 0.2 million**  
**Estimated years of class-A seed in storage 12.5 years**

**Seedling Use Trend - 2003 to 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.

- 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)

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