

SPU # 1		Douglas-fir Maritime 1 - 900m																	
		Breeding and Orchard Production																	
		Adjusted for new Parent Tree Area of use. Previously 1-700m																	
Program category: Advanced-generation																			
		Seedling need (million): 14.7																	
		* Includes Georgia Lowlands (GL)																	
		filename: 01 FdcM low Sept 2017.xlsx																	
STRATEGY		Full-sib F1 diallel tests planted 1975 to 1985; OP tests 1986 and 1987; F2 design using small sublines with forward selections from all F1 test series; currently over 3/4 established. Focus on stem volume while maintaining stem form and wood density. Upgrade orchards as information and selections allow.																	
TRAITS		Primary: Stem volume Secondary: Wood density, stem form																	
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.		110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110																	
Polycross		320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320																	
Clonal																			
F1		372 372 372 372 372 372 372 372 372 372 372 372 372 372 372 372 372 372 372																	
F2		360 360 360 360 360 360 360 360 360 360 360 360 360 360 360 360 360 360 360																	
F3		220 300 300 300 300 300 300 300 300 300 300 300 300 300 300 300 300 300 300																	
Production forecast (million plantables)																			
Orchards (#, owner)																			
134 TW (Mt Newton)		1.7 1.8 1.9 2.0 2.1 2.2 2.2 2.3 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4																	
154 TW (Mt Newton)		0.9 1.0 1.0 1.1 1.1 1.2 1.2 1.3 1.3 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4																	
166 WFP (SFC)		0.6 0.7 0.7 0.8 0.9 1.0 1.1 1.2 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5																	
405 WFP (SFC)		0.5 0.8 1.0 1.1 1.2 1.3 1.4 1.6 1.7 1.8 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9																	
183 TW (Mt Newton)		0.9 1.0 1.0 1.1 1.1 1.2 1.2 1.3 1.3 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4																	
197 TW (Mt Newton)		1.6 2.1 2.5 3.0 3.4 3.9 4.3 4.6 5.0 5.3 5.6 5.8 5.9 6.0 6.0 6.0 6.0 6.0 6.0																	
199 FLNRO (Saanich)		0.5 0.7 1.0 1.4 1.8 2.1 2.4 2.7 3.0 3.2 3.4 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5																	
Vegetative prod.:																			
Somatic emblings																			
Estimated gain in primary trait																			
Orchards (#, owner)																			
134 TW (Mt Newton)		15% 15% 16% 16% 16% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 18% 18%																	
154 TW (Mt Newton)		13% 13% 13% 13% 14% 14% 14% 14% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15%																	
166 WFP (SFC)		16% 17% 17% 17% 17% 18% 18% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 20% 20%																	
405 WFP (SFC)		19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 20% 20%																	
183 TW (Mt Newton)		15% 15% 16% 16% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 17% 18% 18%																	
197 TW (Mt Newton)		18% 18% 18% 18% 18% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19% 20% 20%																	
199 FLNRO (Saanich)		20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20%																	
Vegetative prod.:																			
Somatic emblings																			
Total Production		6.7 7.9 9.2 10.4 11.7 12.9 14.0 15.0 16.0 16.8 17.4 17.8 18.0 18.1 18.2 18.3 18.2 18.2																	
Total gain		16% 17% 17% 17% 17% 18% 18% 18% 18% 19% 19% 19% 19% 19% 19% 19% 19% 19% 19%																	

GENETIC CONSERVATION STATUS

Conservation statistics

	Seed planning unit (SPU) area	4,634,859	ha
	Area protected within SPU	360,774	ha
	Percentage of SPU area protected	8%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data		>9	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data		98	

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

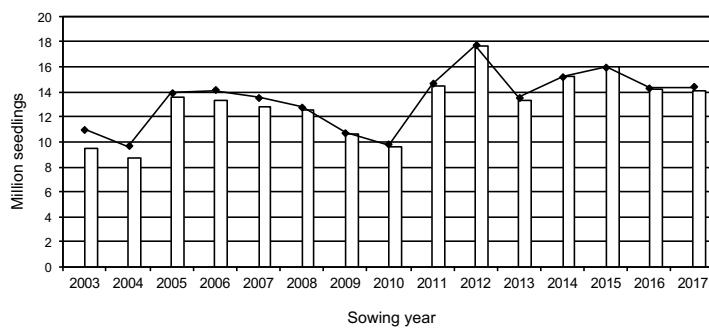
SEEDLING USE AND SEED IN STORAGE

Average 5-year seedling use from SPAR (2013 - 2017)
Estimated years of class-A seed in storage

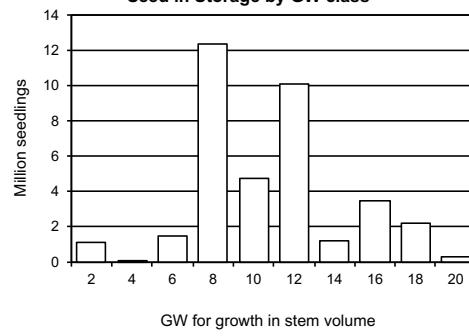
14.7
2.5

million
years

Seedling Use Trend - 2003 to 2017



Seed in Storage by GW class



Notes

- 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)

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.

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 Mot. Branch, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, to confirm data if used for silviculture or timber-supply planning.