

SPU # 33 **Western Redcedar** **Maritime** **700 - 1500m**

Breeding and Orchard Production

Adjusted for new Parent Tree Area of use. Previously 600-1500m

Seedling need (million): 0.5

Program category: First-generation

filename: 33 Cw M high Sept 2017.xlsx

STRATEGY Polycross testing of lower-elevation parents selected from wild stands in the Maritime zone. Upward elevation seed transfer limits will be estimated. Methods are being developed to minimize selfing in wildstand collections .

TRAITS **Primary: stem volume** **Secondary: wood quality and durability**

TESTING AND PRODUCTION **Crop 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.
- Polycross
- Clonal
- F1
- F2
- F3

Production forecast (million plantables)

Orchards (#, owner)

Progeny testing is integrated with low elevation Maritime zone testing. Results will determine seed zone elevation boundary. Seed orchard development is dependent on test results.

Vegetative prod.:

Phase 1

Phase 2

Estimated gain in primary trait

Orchards

Vegetative prod.:

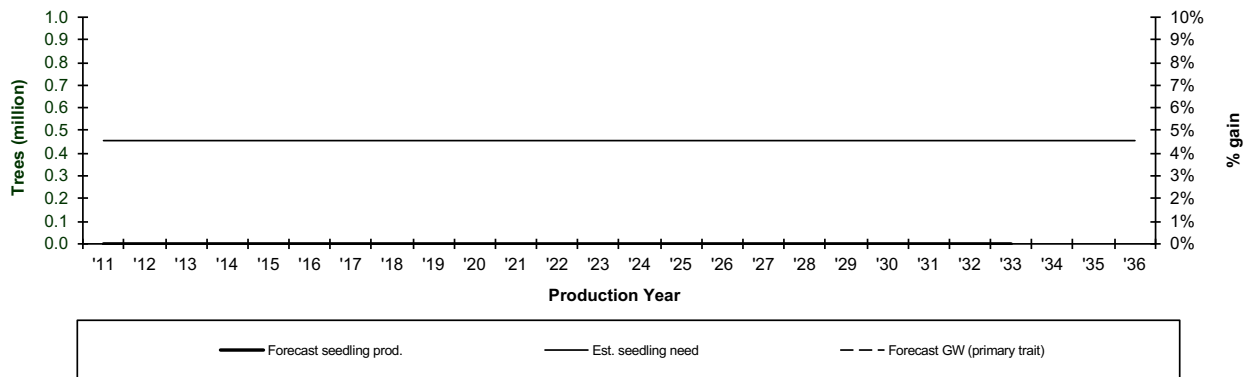
Phase 1

Phase 2

Total Production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Total gain	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
-------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Estimated orchard gain and production
SPU 33 Cw M 700 - 1500m



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.

Western Redcedar Maritime 700 - 1500m
 Conservation -- Seed Orchards -- Seedling Use

SPU #33

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	3,512,544	ha
Area protected within SPU	473,991	ha
Percentage of SPU area protected	13%	
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	41	

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	Total Seedling Prod. million seedlings
No seed orchards at this time							
Total ramets						0	0
Total production							0.00
Vegetative propagation						Stecklings/Emblings	0.0
						Total production	0.0

Seed and Nursery Factors

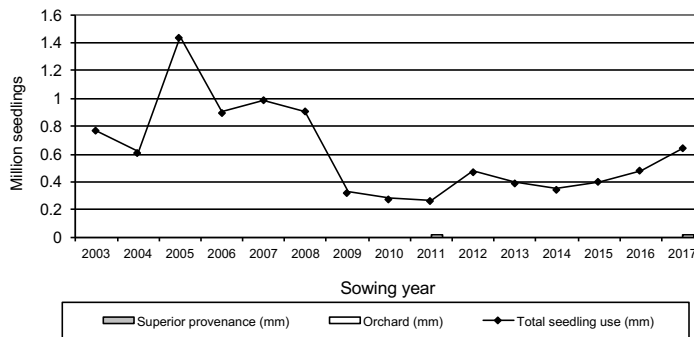
Estimate of Required Orchard Capacity

Expected annual average seedling production per ramet = 10,000	Annual planting (million seedlings)	0.5
Seed weight (seeds/gram) = 766	Planned over-production factor	1.3
Seedling recovery factor (seedlings/seed) = 0.33	Ramets required	46
Seedling recovery factor (seeds/seedling) = 3.03	Ramets required with over-capacity	59
	Projected necessary expansion	59

SEEDLING USE AND SEED IN STORAGE

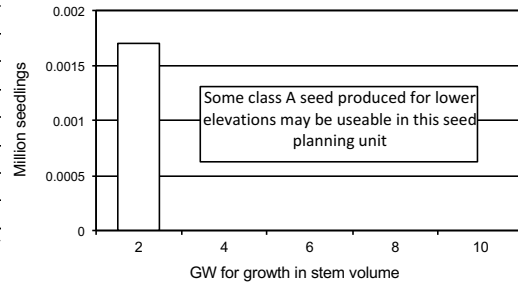
5-year average seedling requests to SPAR (2013 - 2017) **0.5 million**
 Estimated years of class-A seed in storage **0.0 years**

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.

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.