SPU # 54	Red alder	Maritime	1-700

Breeding and orchard production

Adjusted for new Parent Tree Area of use. Previously 1300-1850m

Seedling need (million): 0.4

Program category: First generation only

filename: 54 Dr M low Sept 2017.xlsx

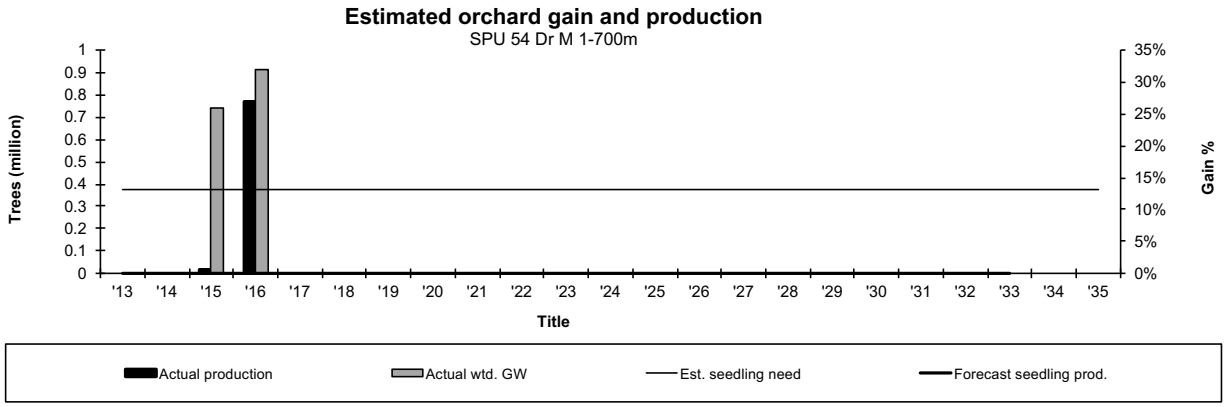
STRATEGY Forty-two seed sources from the M and SM seed zones (48 36' to 54 27') are tested on 2 test sites (planted 1995.) Two provenance-progeny test series were established in 2014 and 2015 at 13 locations; 210 families from 24 natural populations and 32 families from controlled pollinations.

TRAITS **Primary:** Stem volume **Secondary:** Wood density, weevil

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.	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210
Polycross	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Clonal	19	19	19	19	19															
F1	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
F2																				
F3																				
Production forecast (million plantables)																				
Orchards (#, owner)																				
409 FLNR Saanich																				
410 Yellow Point																				

Seed production data are not available for this seed planning unit

Vegetative prod.:																				
Phase 1																				
Phase 2																				
Estimated gain in primary trait																				
Orchards (#, owner)																				
409 FLNR Saanich	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%
410 Yellow Point																				
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	0.0
Total gain	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%



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.

Red alder Maritime 1-700

SPU #54

Conservation -- Seed Orchards -- Seedling Use

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	**0**	**ha**
Area protected within SPU	**0**	**ha**
Percentage of SPU area protected		
Estimated genetic reserves with >5000 mature trees based on botanical sample data		
Confirmed genetic reserves with >5000 mature trees based on forest inventory data		

Data not yet available for this seed planning unit

Conservation status

Current in-situ protection status:

Probability of maintaining > 3 protected areas with adequate population size given natural disturbance regimes:

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
FLNRO Saanich	409	19	28%	103	104	0.8	**0.36**
YPP	410	19	TBD	99	99	0.7	**0.35**
			Total ramets	**202**	**203**	**Total production**	**0.71**

Vegetative propagation	**Stecklings/Emblings**	**0.0**
	Total production	**0.7**

Seed and Nursery Factors

Expected annual average seedling production per ramet * =	**3,500**
Seed weight (seeds/gram) =	**1,600**
Seedling recovery factor (seedlings/seed) =	**0.30**
Seedling recovery factor (seeds/seedling) =	**3.33**

*** Estimate. No seed production / ramet statistics are available.**

Estimate of Required Orchard Capacity

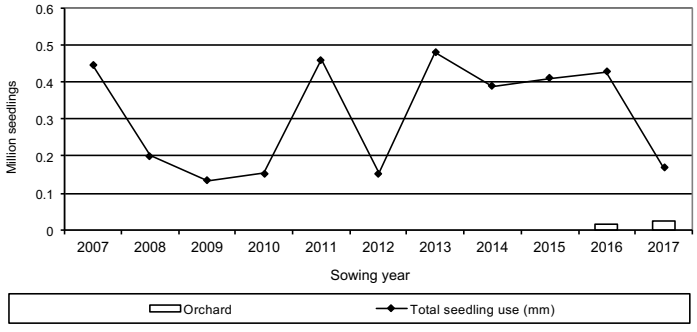
Annual planting (million seedlings)	**0.4**
Planned over-production factor	**1.3**
Ramets required	**107**
Ramets required with over-capacity *	**134**
Projected necessary expansion	**0**

SEEDLING USE AND SEED IN STORAGE

5-year average seedling requests to SPAR (2012 - 2016) **0.4** **million**

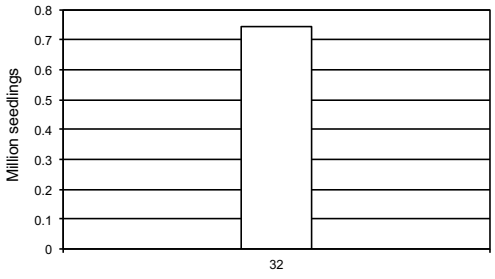
Estimated years of class-A seed in storage **2.0** **years**

Seedling Use Trend - 2007 to 2017



Seedling use data include 1/2 of adjacent overlap zones, where applicable
Sowing year: Aug 1 to July 31 (i.e. 2018 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.