

SPU # 53	Douglas-fir	Thompson Okanagan	1100 - 1600
Breeding and orchard production			
Adjusted for new Parent Tree Area of use. Previously 1300-1850m			Seedling need (million): 2.4
Program category: First generation only			
filename: 53 Fdi TO high Sept 2017.xlsx			

STRATEGY Parent-tree selection in wild stands. Open-pollinated testing of parent trees. Some testing out of zone with climate modelling used to determine parent suitability withing the seed planning unit.

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.
 Polycross
 Clonal
 F1
 F2
 F3

Production forecast (million plantables)

Orchards (#, owner)																					
354 PRT / SelectSeed	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.5	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0

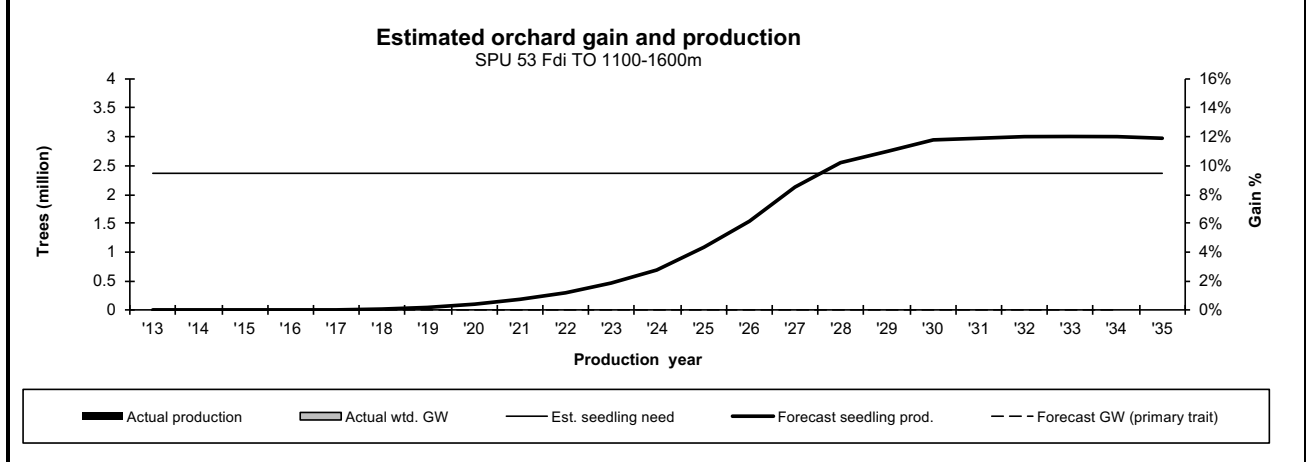
Vegetative prod.:
 Phase 1
 Phase 2

Estimated gain in primary trait

Orchards (#, owner)	Gain not estimated at this time																			
354 PRT / SelectSeed																				

Vegetative prod.:
 Phase 1
 Phase 2

Total Production	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.5	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total gain	0%	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.

Douglas-fir Thompson Okanagan 1100 - 1600
 Conservation -- Seed Orchards -- Seedling Use

SPU #53

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	2,981,748	ha
Area protected within SPU	381,511	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	33	

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	
PRT / SelectSeed	354	45	TBD	1,965	2,100	70.9	3.06	New orchard in propagation
Total ramets				1,965	2,100	Total production	3.06	
Vegetative propagation						Stecklings/Emblings	0.0	
						Total production	3.1	

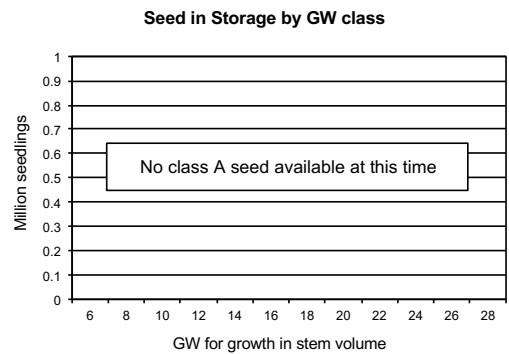
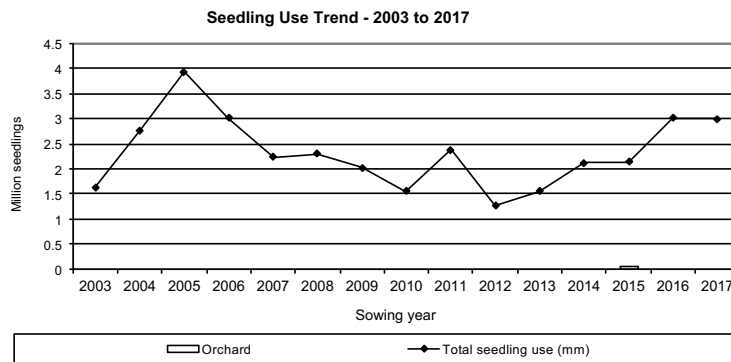
Seed and Nursery Factors

Estimate of Required Orchard Capacity

Expected annual average seedling production per ramet = 1,457	Annual planting (million seedlings) = 2.4
Seed weight (seeds/gram) = 82	Planned over-production factor = 1.2
Seedling recovery factor (seedlings/seed) = 0.53	Ramets required = 1,624
Seedling recovery factor (seeds/seedling) = 1.90	Ramets required with over-capacity = 1,949
	Projected necessary expansion = 0

SEEDLING USE AND SEED IN STORAGE

5-year average seedling requests to SPAR (2012 - 2016) **2.4 million**
 Estimated years of class-A seed in storage **0.0 years**



- 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.

Seedling use data include 1/2 of adjacent overlap zones, where applicable
 Sowing year: Aug 1 to July 31 (i.e. 2016 sowing year starts Aug 1, 2017)

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