

**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): 1.9**  
**Program category: First generation only**      filename: 53 Fdi TO high July 12, 2015

**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)**

**Parents in progeny test:**

Open pollin.  
Polycross  
Clonal  
F1  
F2  
F3

**Production forecast (million plantables)**

Orchards (#, owner)	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
354 PRT / SelectSeed	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.1	1.6	2.3	2.8	3.0	3.2	3.2	3.2	3.2	3.2

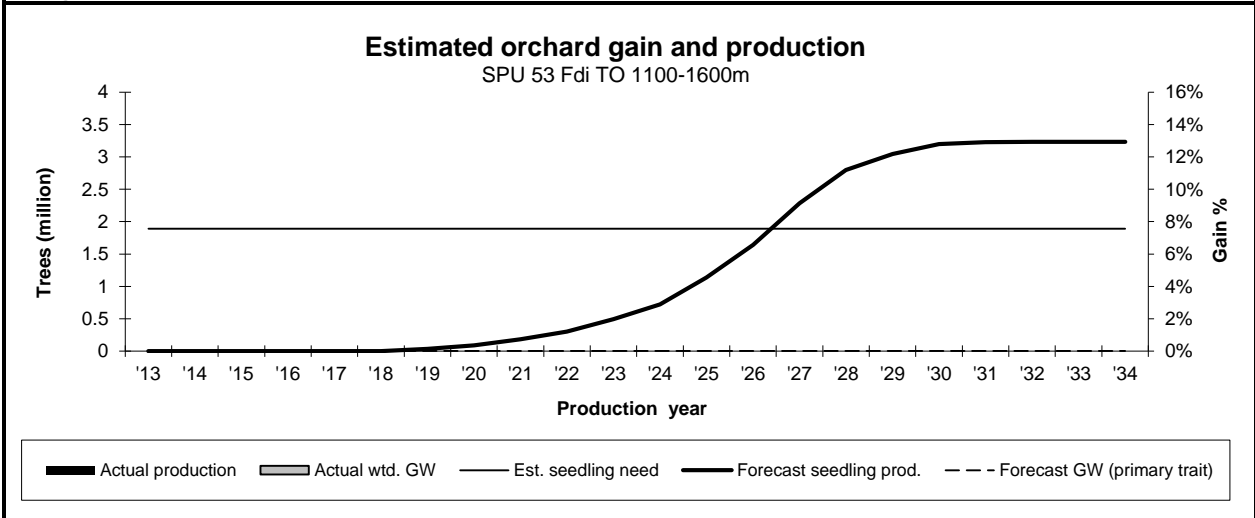
**Vegetative prod.:**  
Phase 1  
Phase 2

**Estimated gain in primary trait**

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

**Vegetative prod.:**  
Phase 1  
Phase 2

<b>Total Production</b>	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.1	1.6	2.3	2.8	3.0	3.2	3.2	3.2	3.2	3.2
<b>Total gain</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%



Seed production estimates are subject to change. When using this information for silviculture planning or timber supply analysis, contact the Tree Improvement Branch of the Ministry of Forests Lands and Natural Resource Operations to confirm data. See SeedMap on [www.for.gov.bc.ca/hti/seedmap](http://www.for.gov.bc.ca/hti/seedmap) for current inventory by Seed Planning Unit

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

**SPU #53**

**GENETIC CONSERVATION STATUS**

**Conservation statistics**

Seed planning unit (SPU) area	<b>2,981,748</b>	<b>ha</b>
Area protected within SPU	<b>381,511</b>	<b>ha</b>
Percentage of SPU area protected	<b>13%</b>	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	<b>&gt;9</b>	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	<b>33</b>	

**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	TBD	45	TBD	2,000	2,200	74.3	<b>3.21</b>	New orchard in propagation
				<b>Total ramets</b>	<b>2,000</b>	<b>2,200</b>	<b>Total production</b>	<b>3.21</b>
Vegetative propagation							<b>Stecklings/Emblings</b>	<b>0.0</b>
							<b>Total production</b>	<b>3.2</b>

**Seed and Nursery Factors**

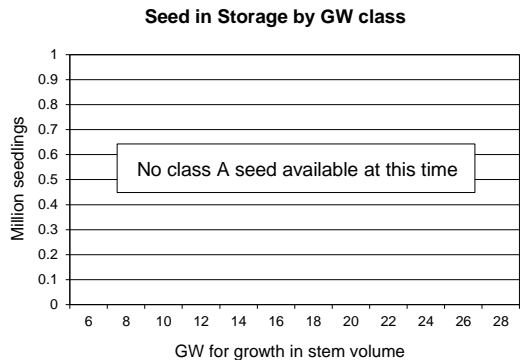
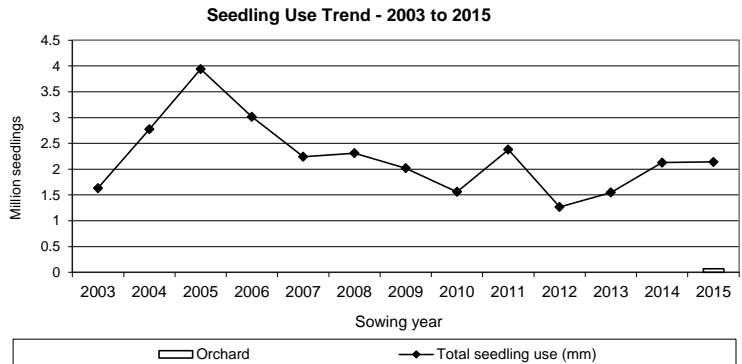
<b>Expected annual average seedling production per ramet =</b>	<b>1,457</b>
<b>Seed weight (seeds/gram) =</b>	<b>82</b>
<b>Seedling recovery factor (seedlings/seed) =</b>	<b>0.53</b>
<b>Seedling recovery factor (seeds/seedling) =</b>	<b>1.90</b>

**Estimate of Required Orchard Capacity**

<b>Annual planting (million seedlings)</b>	<b>1.9</b>
<b>Planned over-production factor</b>	<b>1.2</b>
<b>Ramets required</b>	<b>1,299</b>
<b>Ramets required with over-capacity</b>	<b>1,558</b>
<b>Projected necessary expansion</b>	<b>0</b>

**SEEDLING USE AND SEED IN STORAGE**

**5-year average seedling requests to SPAR (2011 - 2015)**      **1.9**      **million**  
**Estimated years of class-A seed in storage**      **0.0**      **years**



Seedling use data include 1/2 of adjacent overlap zones, where applicable  
 Sowing year: Aug 1 to July 31 (i.e. 2015 sowing year starts Aug 1, 2014)

- Notes:
- Seed held in both "reserve" and "available" status in the Seed Planning and Registration (SPAR) system is included
  - Seed inventories change with new orders. Data presented here are based on a June sample.
  - For up-to-date information use SPAR, or contact the Tree

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