

SPU # 41	Interior Douglas-fir	Prince George	700 - 1200m
Breeding and Orchard Production			Seedling need (million): 1.2
Adjusted for new Parent Tree Area of use. Previously 700-1000m			filename: 41 Fdi PG low July 12, 2015
Program category: First-generation			

STRATEGY Parent-tree selection in wild stands in the PG zone. Progeny tests using open-pollinated seed from selected parents. Focus on stem volume while minimizing loss in wood density. Selection of best parents for seed orchards based on progeny test performance.

TRAITS	Primary: Stem volume	Secondary: Wood density
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TESTING AND PRODUCTION	Production Year (July 1 to June 30) -- (Cone harvest year shown)																			
	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34

Parents in progeny test:																				
Open pollin.	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Polycross																				
Clonal																				
F1																				
F2																				
F3																				

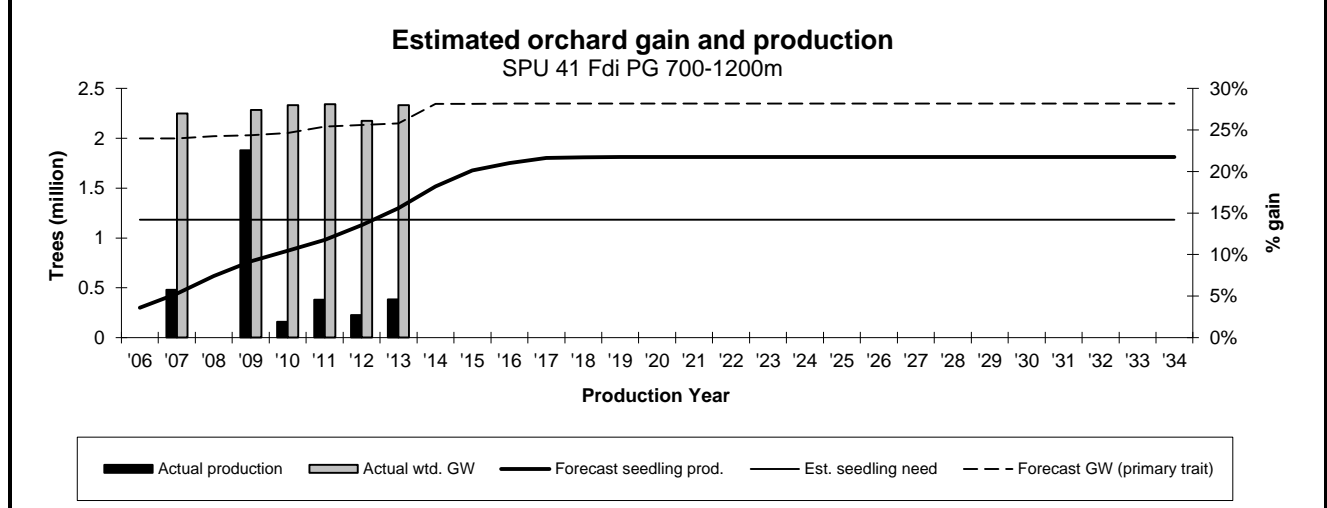
Production forecast (million plantables)																				
Orchards (#, owner)																				
225 VSOC	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
233 -VSOC/SelectSeed	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Vegetative prod.:
Phase 1
Phase 2

Estimated gain in primary trait																				
Orchards (#, owner)																				
225 VSOC	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
233 -VSOC/SelectSeed	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%

Vegetative prod.:
Phase 1
Phase 2

Total Production	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Total gain	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%



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 for current inventory by Seed Planning Unit

Interior Douglas-fir Prince George 700 - 1200m

Conservation -- Seed Orchards -- Seedling Use

SPU #41

GENETIC CONSERVATION STATUS**Conservation statistics**

Seed planning unit (SPU) area	5,363,358	ha
Area protected within SPU	186,117	ha
Percentage of SPU area protected	3%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	>4	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	23	

Conservation status

Current in-situ protection status: **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
VSOC (Vernon)	225	30	27%	500	507	14.6	0.7
VSOC/SelectSeed	233	41	29%	744	786	22.7	1.1
Total ramets				1,244	1,293	Total production	1.9

Vegetative propagation

Stecklings/Emblings	0.0
Total production	1.9

Seed and Nursery Factors

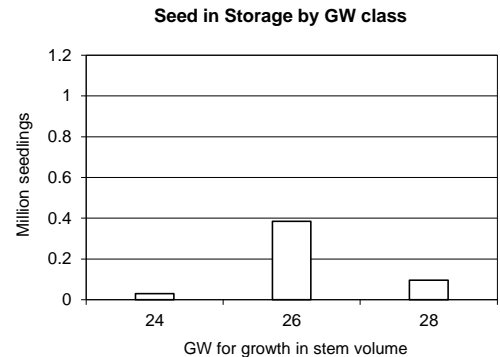
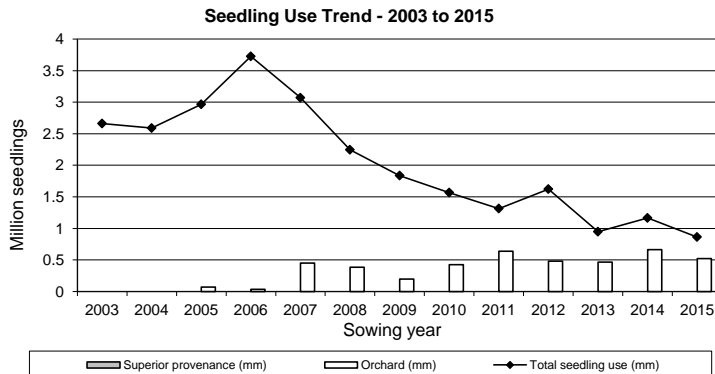
Expected annual average seedling production per ramet = 1,457
Seed weight (seeds/gram) = 96
Seedling recovery factor (seedlings/seed) = 0.53
Seedling recovery factor (seeds/seedling) = 1.90

Estimate of Required Orchard Capacity

Annual planting (million seedlings)	1.2
Planned over-production factor	1.3
Ramets required	811
Ramets required with over-capacity	1,055
Projected necessary expansion	0

SEEDLING USE AND SEED IN STORAGE

5-year average seedling requests to SPAR (2011 - 2015) 1.2 million
Estimated years of class-A seed in storage 0.4 years



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 an June sample.
- For up-to-date information use SPAR, or contact the Tree Improvement Branch of the Ministry of Forests and Range

- 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)

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 See SeedMap on www.for.gov.bc.ca/hti/seedmap for current inventory by Seed Planning Unit