

SPU # 40 mid	Interior Spruce	Peace River	650 - 1200m
Breeding and Orchard Production			
Program category: First-generation			Seedling need (million): 6.6
			Program rank: 22
	filename: 40 Sx PR July 12, 2015		

STRATEGY Parent tree selection from wild stands in the PR zone. Progeny tests using open-pollinated seed from selected parents. Focus on stem volume. Best parents, based on offspring performance on progeny tests, are selected for seed production in an open-pollinated seed orchard.

TRAITS	Primary: Stem volume	Secondary: Wood density, weevil
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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.	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351
Polycross																				
Clonal																				
F1	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
F2																				
F3																				

Production forecast (million plantables)																				
Orchards (#, owner)																				
212 MFLNRO (Skimikin)	15.5	16.0	16.3	16.3	16.4	16.4	16.4	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5

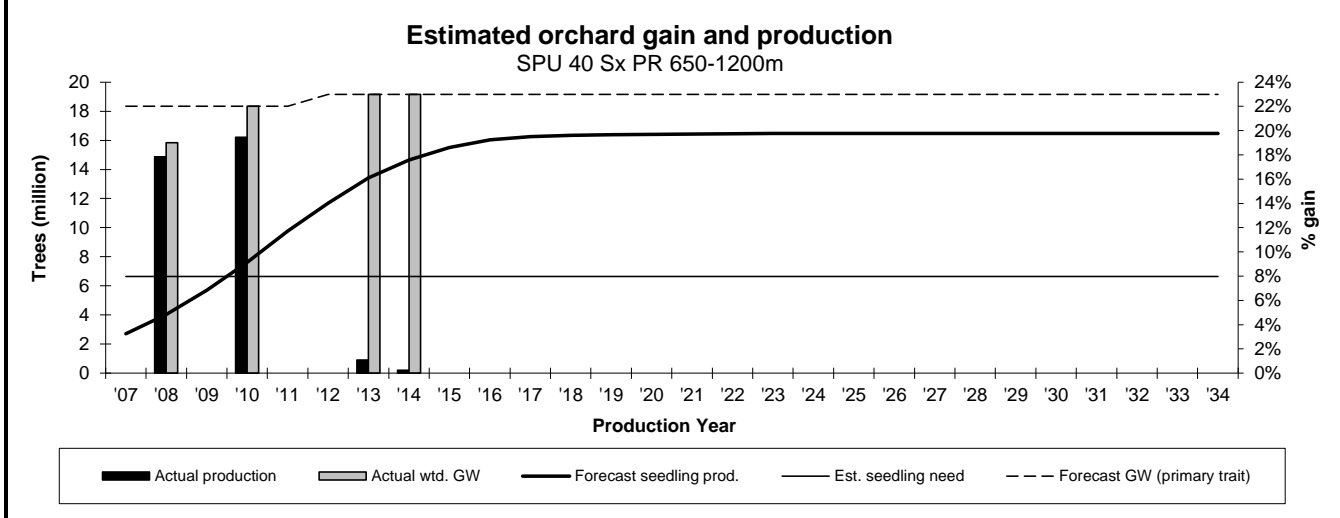
Also see SPU 40 Low for elevations below 650m

Vegetative prod.:
Phase 1
Phase 2

Estimated gain in primary trait																				
Orchards (#, owner)																				
212 MFLNRO (Skimikin)	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%

Vegetative prod.:
Phase 1
Phase 2

Total Production	15.5	16.0	16.3	16.3	16.4	16.4	16.4	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
Total gain	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%



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/htl/seedmap for current inventory by Seed Planning Unit

Interior Spruce Peace River 650 - 1200m
Conservation -- Seed Orchards -- Seedling Use

SPU #40 (mid)

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	11,644,978	ha
Area protected within SPU	255,930	ha
Percentage of SPU area protected	2%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	0	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	3	

Conservation status

Current in-situ protection status: **Acceptable**
Probability of maintaining > 3 protected areas with adequate population size given natural disturbance regimes: **Uncertain**

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 (Skimikin)	212	40	23%	2,747	2,875	97.3	17.25	Mid elevation (650-1200m)	
Total ramets				2,747	2,875	Total production	17.3		
Vegetative propagation							Stecklings/Emblings	0.0	
							Total production	17.3	

Seed and Nursery Factors

Estimate of Required Orchard Capacity

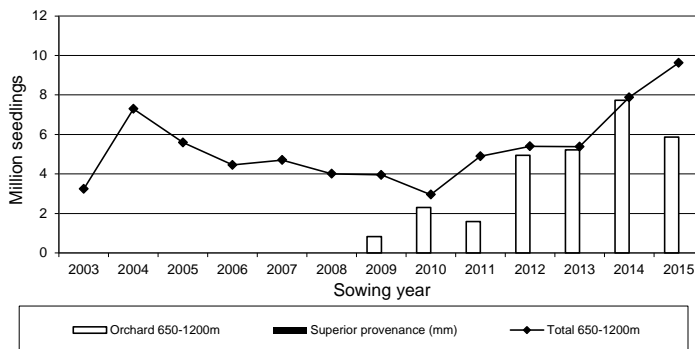
Expected annual average seedling production per ramet = 6,000	Annual planting (million seedlings) = 6.6
Seed weight (seeds/gram) = 394	Planned over-production factor = 1.2
Seedling recovery factor (seedlings/seed) = 0.45	Ramets required = 1,106
Seedling recovery factor (seeds/seedling) = 2.22	Ramets required with over-capacity = 1,327
	Projected necessary expansion = 0

Progeny test data will determine whether the low-elevation need should be developed in conjunction with mid-elevation, or as a separate orchard.

SEEDLING USE AND SEED IN STORAGE

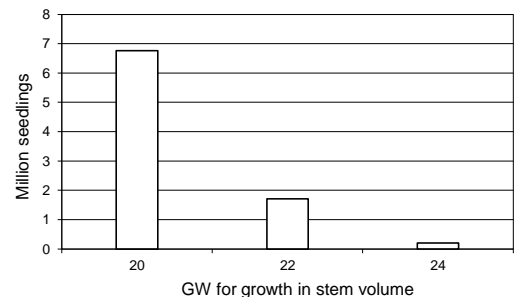
5-year average seedling requests to SPAR (2011 - 2015) 6.6 million
Estimated years of class-A seed in storage 1.3 years

Seedling Use Trend - 2003 to 2015 for 650-1200m and < 650m elev.



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)

Seed in Storage by GW class



- 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 Improvement Branch of the Ministry of Forests and Range

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