

SPU # 20

Interior Lodgepole Pine

Nelson

1600-2000m

Breeding and orchard production

Seedling need (million): 1.6

Program category: First-generation

filename: 20 Pli NE high July 12, 2015

STRATEGY

Selection of parent trees in wild stands. Open-pollinated progeny tests on multiple sites. Selection for seed orchards of best parents and offspring, with a focus on stem volume and form. Second generation breeding will focus on volume and wood density.

TRAITS

Primary: Stem volume

Secondary: Wood density

TESTING AND PRODUCTION

Production Year (July 1 to June 30) -- (Cone harvest year shown)

Parents in progeny test:

	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
Open pollin.	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286
Polycross																				
Clonal																				
F1	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
F2																				
F3																				

Production forecast (million plantables)

Orchards (#, owner)

349 FLNRO (Skimikin)	0.3	0.4	0.7	1.0	1.2	1.4	1.7	2.1	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
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Vegetative prod.:

Phase 1
Phase 2

Estimated gain in primary trait

Orchards (#, owner)

349 FLNRO (Skimikin)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
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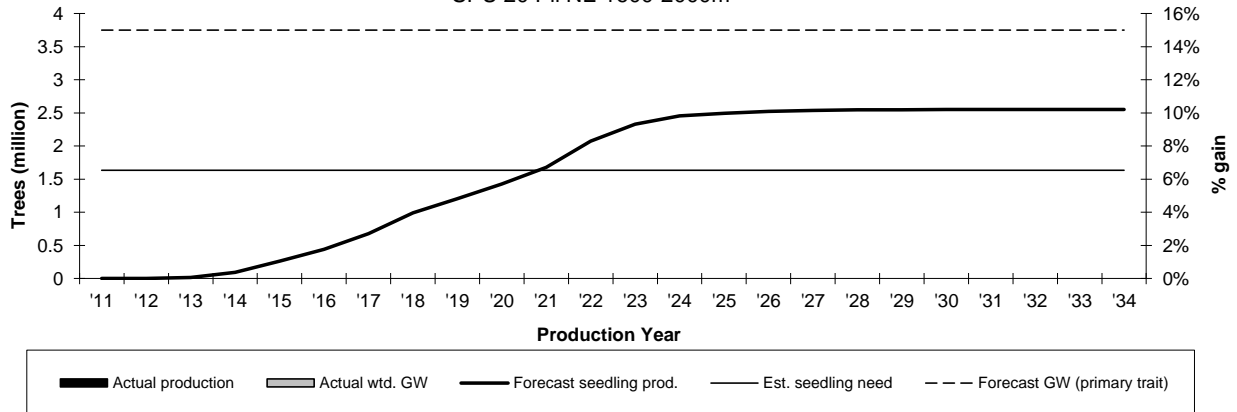
Vegetative prod.:

Phase 1
Phase 2

Total Production	0.3	0.4	0.7	1.0	1.2	1.4	1.7	2.1	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
Total gain	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%

Estimated orchard gain and production

SPU 20 Pli NE 1600-2000m



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

Lodgepole pine Nelson 1600 - 2000m
CONSERVATION -- SEED ORCHARDS -- SEEDLING USE

SPU # 20

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	1,935,247	ha
Area protected within SPU	257,203	ha
Percentage of SPU area protected	13%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	>2	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	17	

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
FLNRO (Skim)	349	40	15%	2,077	2,108	15.4	2.55
Total ramets				2,077	2,108	Total production	2.55
Vegetative propagation						Stecklings/Emblings	0.0
						Total production	2.6

Seed and Nursery Factors

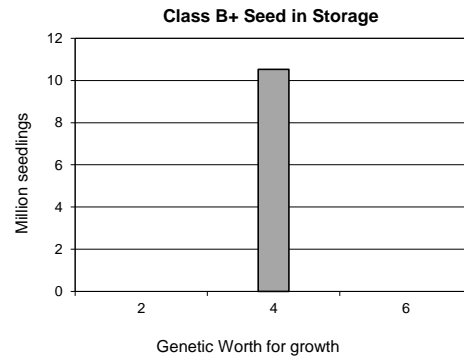
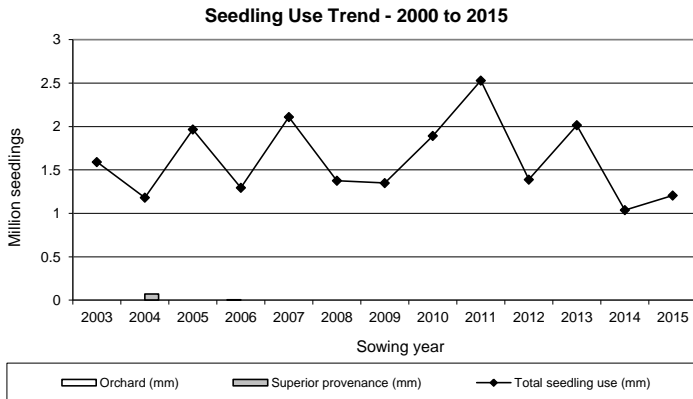
Estimate of Required Orchard Capacity

Expected annual average seedling production per ramet = 1,210	Annual planting (million seedlings)	1.6
Seed weight (seeds/gram) = 256	Planned over-production factor	1.3
Seedling recovery factor (seedlings/seed) = 0.65	Ramets required	1,351
Seedling recovery factor (seeds/seedling) = 1.55	Ramets required with over-capacity	1,757
	Projected necessary expansion	0

Superior provenances (B+) suitable for this Seed Planning Unit
 Cartwright Lake, Lossie Creek, and Rocky Mountain Trench

SEEDLING USE AND SEED IN STORAGE

Average 5-year seedling use from SPAR (2011 - 2015) 1.6 million
Estimated years of class B+ seed in storage 6.4 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 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