

- First selection of plus trees
- Establishing of seed orchards
- Main breeding activities
- Some results

- First selection of plus trees
 - Started at late 50-ies last century Janis
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 - Continued during 60-ies and 70-ies last century
 - Selected plus trees:
 - · about 880 scotch pine
 - About 600 Norway spruce
 - Other species birch, oak, ahs, larch, black and grey alders

Establishing of seed orchards

- Started at 1960 in Forest reseach stationa«Kalsnava»
 - 1960/1961 first pine seed orchard 1 ha
 - base for different research projects pruning methodes, thining, crossing
 - · 1962 first 'resin pine' seed orchard 1 ha
- Continued during 60-ies and 70-ies last century
 - Regional orchards using regional clones
 - Manily scotch pine, Norway spruce and larch

Main breeding activities

- Selecting of plus trees and plus stands
- Artificial crossing of different clones
- Establishing of progeny tests
- Establishing of geographical tests
- Studies of phenology, flowering, cone drying and opening
- Measuring and data analysis

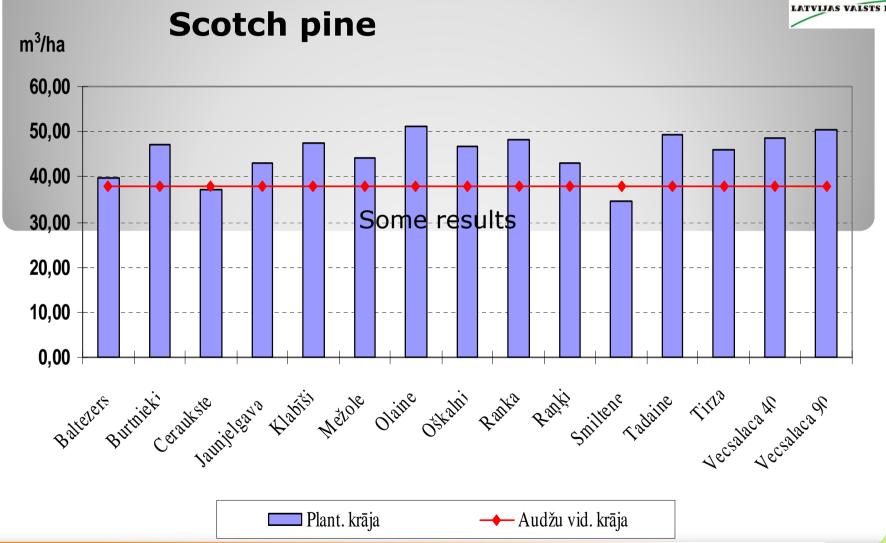
Some results

- Selected provenance regions in Latvia vor all main species
- Seeds from seed orchards:
 - scotch pine 100 % selected from midle of 80-ies last century
 - Norway spruce 90 % selected
- Establishing of 1.5 generation sedd orchards from 1986

Breeding impact from first generation orchards



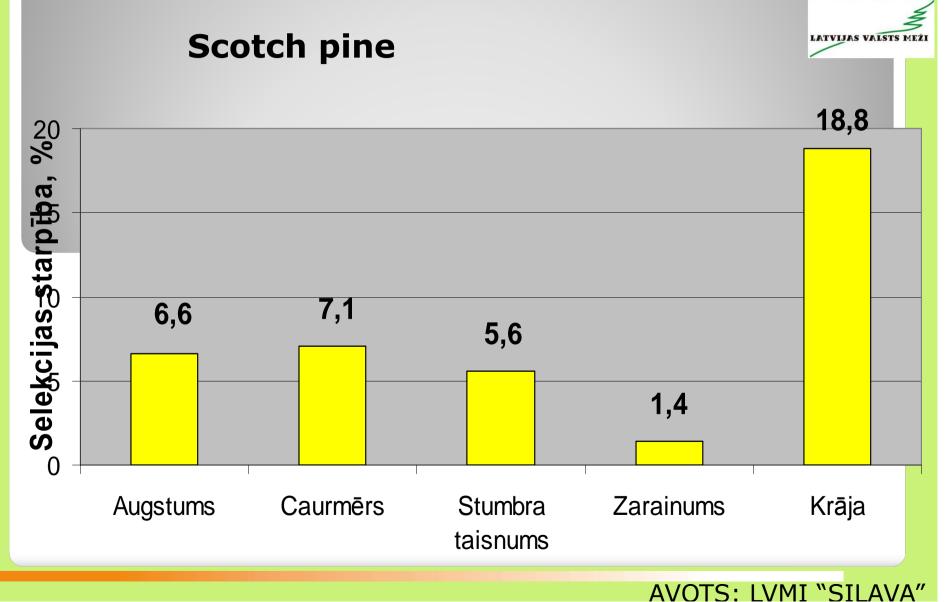




AVOTS: LVMI "SILAVA"

Breeding impact from first generation orchards



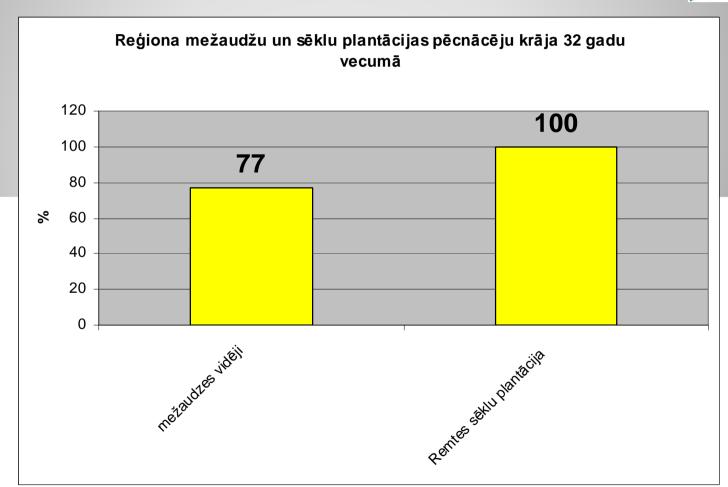


Breeding impact from first generation orchards

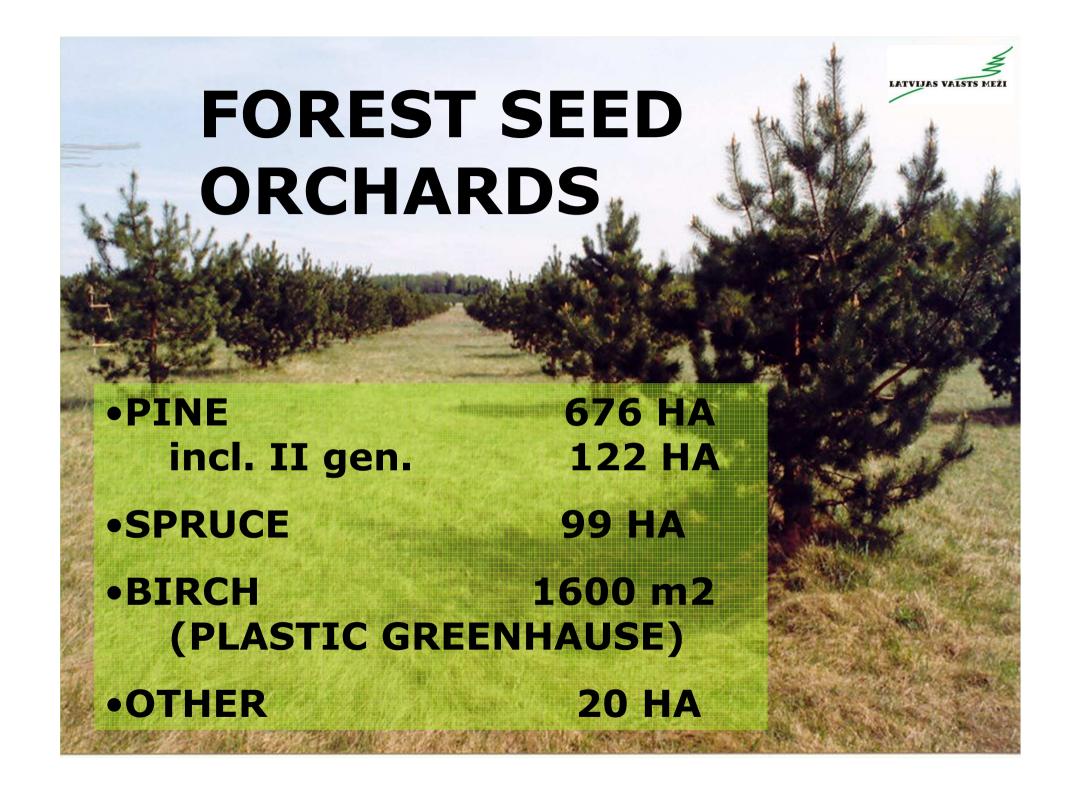


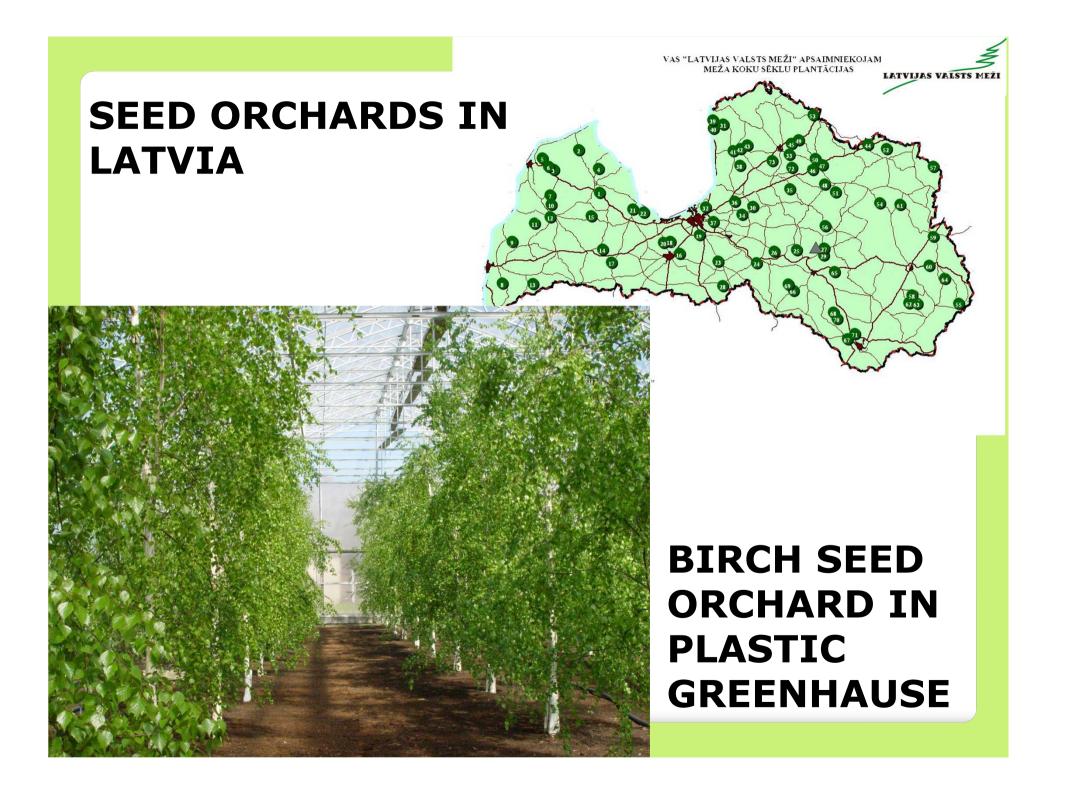
Norway spruce





AVOTS: LVMI "SILAVA"





- Realizing of tree breeding strategy for 30 years, accepted 2008
- Establishing of seed orchards from next breeding generations:
 - Scotch pine II and III generations (grafting program from 2010)
 - Norway spruce II generation (grafting program from 2012)
 - Silver birch II generation (grafting program from 2013)

Actualities



- Developing of vegetative propagation of Norway spruce clones with extra high productivity – rooted cuttings, somatic embryogenesis
- Stimulation of seed production in Norway spruce seed orchards
- Mechanizing of formatting of crones in seed orchards

Actualities





