FINNISH
BIRCH SEED ORCHARD MANAGEMENT

Sirkku Pöykkö
At the beginning of the 1970’s the seed production of birch was revolutionized when the Foundation for Forest Tree Breeding developed the plastic greenhouse and the related growing technique.
The first birch seed orchards were established already at the beginning of the 1970’s at Haapastensyrjä.
Growing substrate
- white peat
- 1 kg/m³ basic fertilizer (NPK 11-24-24+ micro), 5 kg/m³ lime
- 40 cm layer
Planting density: 3 m x 4 m
Fibre cloth + lime stone (Ø 8-16 mm)
Maintenance
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  greenhouses are closed 4-5 weeks before natural flowering time
  ventilation temperature +22-25 °C
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  - CO$_2$: propane burning at 04:00-07:00, max. 1000 ppm
  - heat: ventilation limit +30-35 °C
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- Fertilization
  granular fertilizer, NPK 26,6-1,3-4,3 + S, B, Se, May and late June
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- Plant protection
  when needed, varying active substances, test sprayings
PRODUCTION IN 1970-2012
- 35 seed orchards
  (27 *Betula pendula*, 6 *B. pubescens*, 2 *B. pendula var. carelica*)
- 3300 kg seed
The Finnish Birch Seed Orchards

ANNUAL SEED CROP

- Annual seed crop, kg
- Production area, ha

Year

kg

ha
GENETIC GAINS

(Betula pendula)

Volume  +29%
Relative tapering  -13%
Relative branch diameter  -10%
New seed orchards 2014
- selected full-sib families
- seed mixed after collection
- genetic gain 30-35%

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Photographers

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- Esa Mustonen
- Sirkku Pöykkö
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Thank you!