

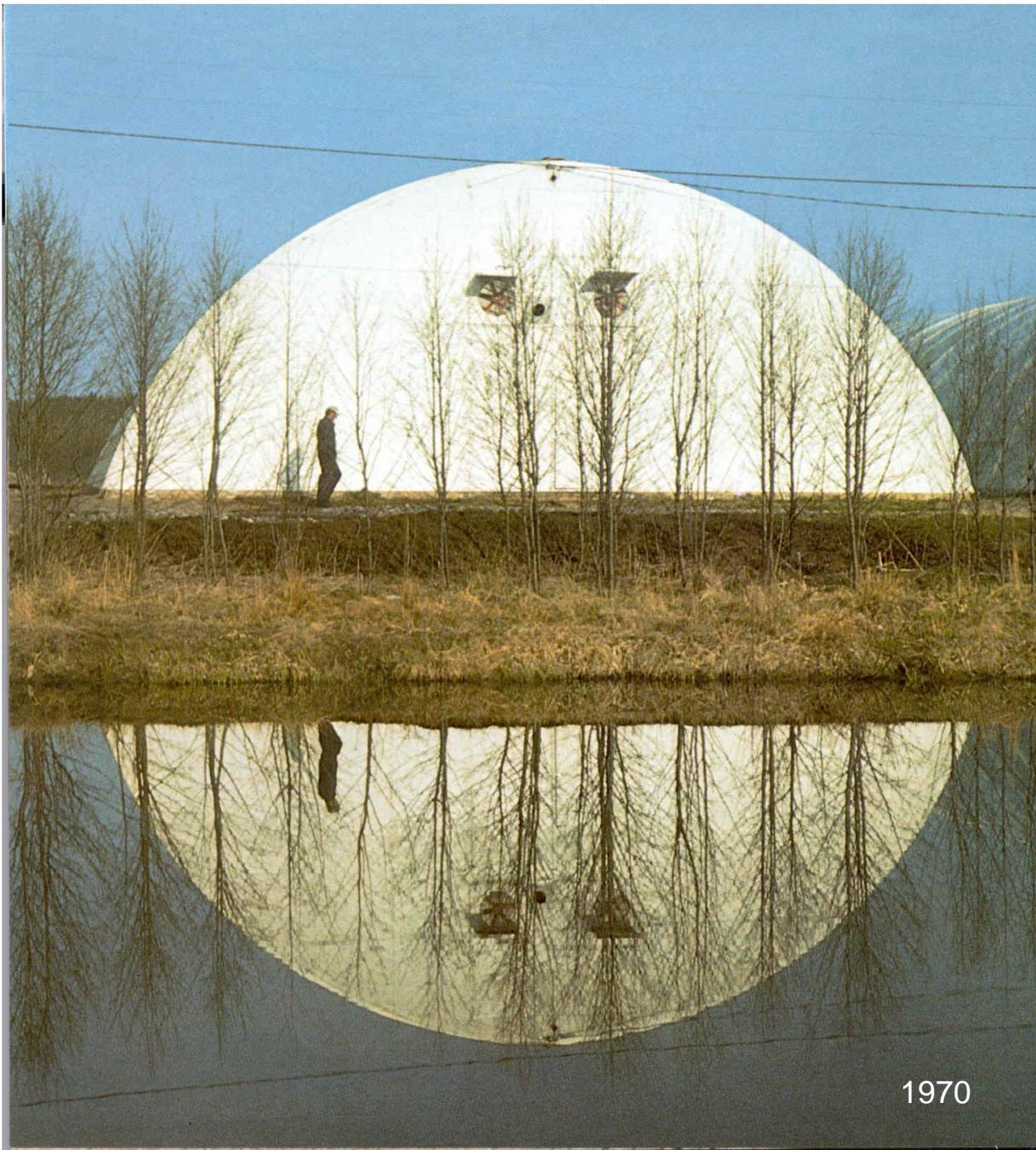
# NordGen

Akureyri 11.4.2018

*FINNISH  
BIRCH SEED  
PRODUCTION  
IN GREENHOUSE  
ORCHARDS*

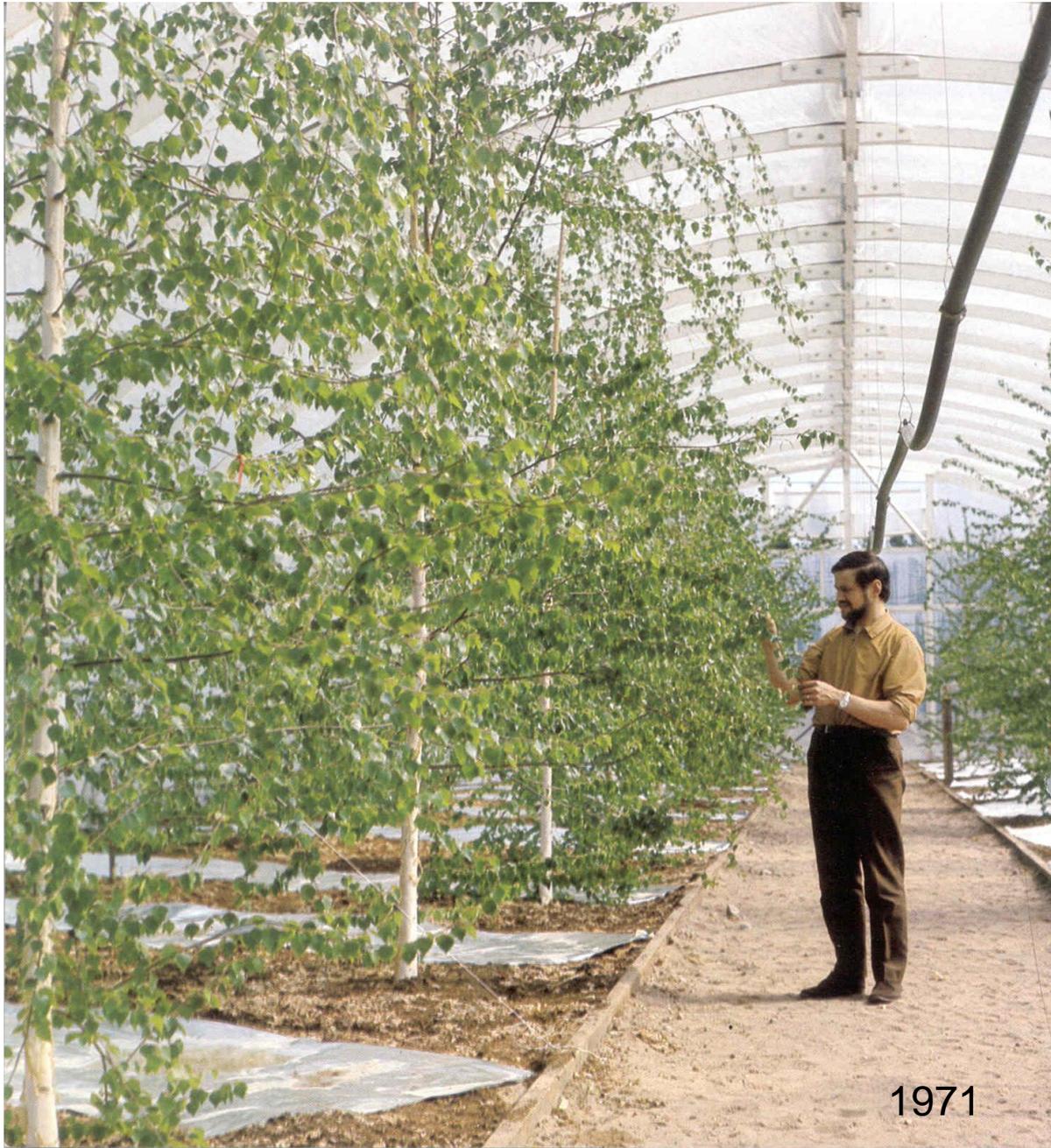
Sirkku Pöykkö





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.

1970



The first birch seed orchards were established already at the beginning of the 1970's at Haapastensyrjä.

1971

# GREENHOUSES

wooden structure

single plastic cover; 0,2 mm UV-protected EVA-film

automatic roof vents,  
side vents often  
manually operated

+ cheap

- low side shape





Planting with 1-year-old grafts, grafting in May-April, planting in August









# Growing substrate

- white peat
- 1 kg/m<sup>3</sup> basic fertilizer (NPK 14-7-15), 5 kg/m<sup>3</sup> lime
- 40 cm layer





**PEATCARE™**  
11-24-24+micro  
(11-10.5-19.9+micro)

BEST BEFORE 5/20/15  
PROD. DATE MAY 2015



25 kg

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UN3077  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE  
SOLID N.O.S. (Corrosive, Harmful)

IN/INDUPAC 3004

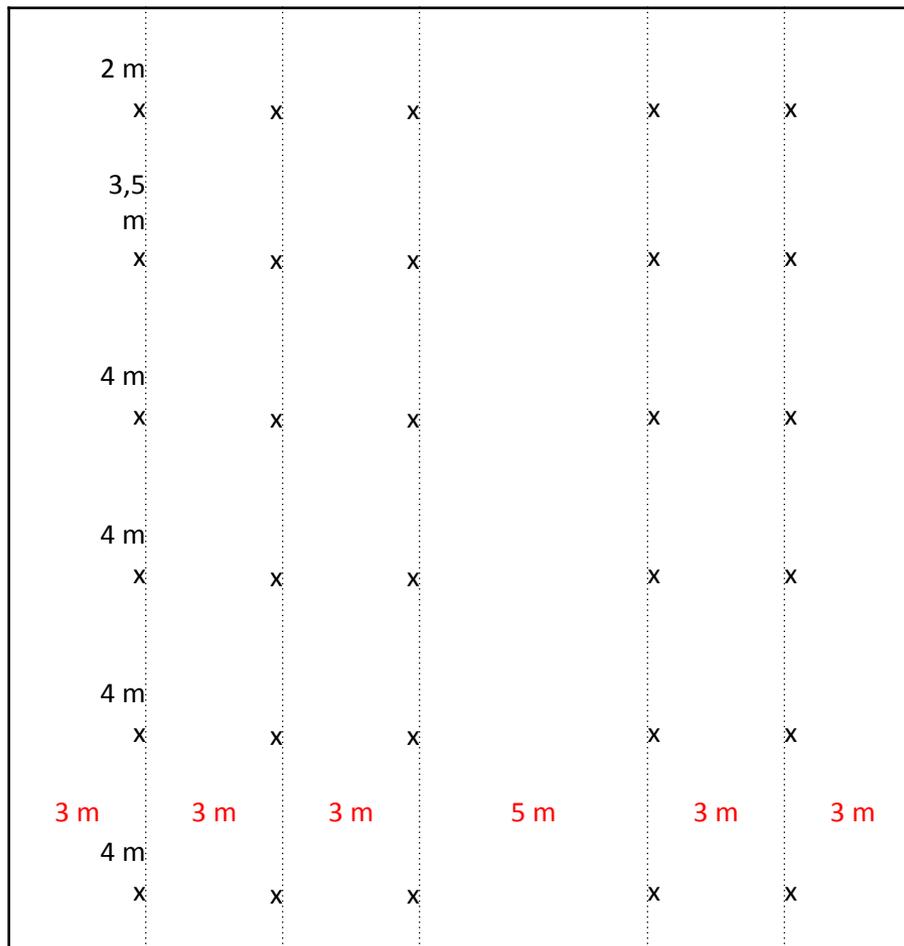
SH4/Y26/S/14/NL/INDUPAC 2004

SH4/Y26/S/14/NL/INDUPAC 3004





# Planting density: 3 m x 4 m









Fibre cloth + lime stone ( $\varnothing$  8-16 mm)

# Maintenance

- Ventilation, timing of flowering

  - greenhouses are closed 4-5 weeks before natural flowering time

  - ventilation temperature +22-25 °C

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Fans for circulating the pollen

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  - granular fertilizer, NPK 26,6-1,3-4,3 + S, B, Se, May and late June

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- Plant protection
  - regular, frequent control
  - treatments when needed, varying active substances, test sprayings

Seed collection by hand:

- lifters





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- lifters
- ladders

## Pruning of grafts

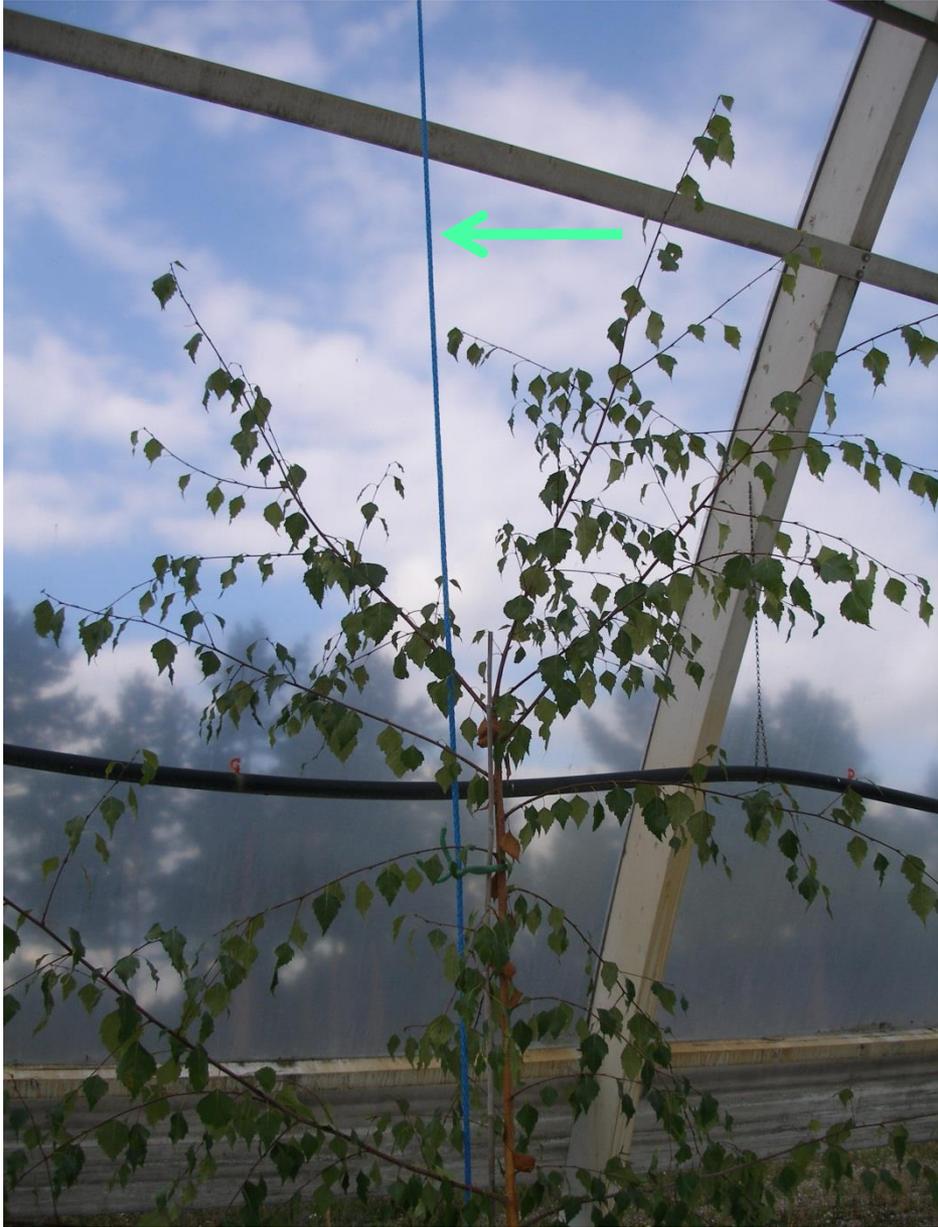




















Rotation period ~ 10 years



**PRODUCTION IN 1970-2012**

**- 35 seed orchards**

**(27 *Betula pendula*, 6 *B. pubescens*, 2 *B. pendula* var. *carelica*)**

**- 3300 kg seed**

# Photographers

- Jyrki Airaksinen
- Leo Holopainen
- Jari Laukkanen
- Eveliina Masonen
- Esa Mustonen
- Sirkku Pöykkö
- Esa Virtanen



Thank  
you!