

Seed and plant production - part of profitable forestry

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Seed production

- High quality seed give higher effectivity and profitability in both plant production and wood production
- In the nursery
 - Thinning is not needed if you can sow one seed per container
 - You can take full advantage of nursery facilities

Seed production

- Seed orchards produce genetically superior seed
 - This can be seen both in growth rate and technical quality
 - Production is 10-20 percent higher
 - 1½-generation 15-25 percent
 - Higher yield of saw logs with better quality
- Shorter rotation times and more valuable timber give higher profitability

Seed production



Seed production

- Establishment 20–30 000 euroa/ha + land
- Seed production start after 10 y for pine and 15 y for spruce (birch 2 y)
- Production 5-10 kg/ha and year
- Productive until ~ 50 y age

- State funding 85 % of establishment costs, other costs on the owner of the orchard



Seed production

- Scale benefits
 - Use of facilities is seasonal
 - Seed storage for years with crop failure
 - Know-how of personnel

Production of cuttings

- Immediate utilization of genetical gains, copy the best individuals
- For coniferous trees not yet commercial
- Will the public approve clone forestry?

Plant production

- Planting ensures sufficient use of qualified seed and successful regeneration
- Benefits of containerized seedlings:
 - Sufficient use of valuable sees
 - Storing and transport
 - Planting is fast and easy
 - Better quality for a lower price
 - Enables mechanization

Plant production

- Preconditions for the use of containerized seedlings
 - Well functioning logistics, from seed to planting
 - Rapid regeneration
 - Site preparation of high quality
 - Short training period for planters





Plant production

- An effective plant production requires
 - Production management
 - Good planning
 - Quality approach through the whole process
 - Production costs for one lot is the same regardless whether yield is 70 or 90 percent!
 - Continuous maintenance of facilities

Plant production

- The market in Finland is very competitive
- Market is shared between five major companies
- Wholesale price:
 - Pine (121) one year old 10-12 cents
 - Spruce (81) two year old 19-21 cents

Taimituotanto

- Scale benefits
 - Use of facilities is seasonal
 - Know-how of personnel
 - Remember
 - Transportation costs
 - Risk, pests etc.

Thank you!

