Management of Wild Service for premium timber

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2 Ecology of wild service
3 Management guidelines for premium timber

Saint-Avold
2007:

9.013 €/m³
over bark
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!!! But:
Loss in value down to
< 300 €/m³ for
- otherwise best and largest -
logs with greyish-brown heart!!!

???
Is it possible to avoid this discoloration by slick management???


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> 80 % of all Sorbus-veneers come from Europe

- 80 % of European Sorbus veneers come from NE-France

- Nearly all of them originate from former coppices-with-standards
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**Autecology**

- Shade tolerance: 
  > ash, oak, cherry  
  = maple, lime, hornbeam / < beech
- Final height: 18 to 26 (35) m
- High demands for nutrients
- Rather high thermal requirements
- Excellent drought tolerance
- Good tolerance oxygen deficiency

**Synecology**

- Wild service is not able to withstand in Fageta  
  *Final height and shading of beech*
- Wild service endures in Carpineta  
  *no elimination by oak, hornbeam, field maple, lime*

Wild service is able to 
outlast for more than 100 years under oak canopy 
and then, after gaining free light, 
to produce ring-widths of more than 3 mm
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Temptation:
Selection of many wild services as target trees

But:
Sorbus are notoriously prone to pests
with fire blight as an extremely dangerous threat!

So: Temperance!

Wise management target for Wild service....

Premium quality
in a maximum of 5 (8) crop trees per ha
with low input

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Premium quality.......... 

knotless layer of > 20 cm
without discoloration

No selection of V-forked trees!
Prevent late branch dying!
Integration of the premium production into development phases of trees

- Establishing
- Qualifying
- Dimensioning
- Maturing

Establishing phase

Preferably originating from seeds or suckers

If needed by planting of 1(2) year old seedlings:

2 to 4 wild services accompanied by 15 hornbeams or hazels in 10 to 20 clumps/ha of 5 to 7 m in diameter
Dosage of vegetal concurrence:

only manually in „clumps“

Prevention of deer browsing

individual tree protection only in clumps;

• maybe by shelters
• better not by fencing (too expensive, not sure)
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Qualification phase

Natural process: Severe competition – Emerging supervitals

Management aim:
• sufficient options (twenty are plenty)
• (self-) pruning

Activities: only if necessary

Supervital?

Option?

 Apex overgrown?
 Breaking or girdling
Dimensioning phase

- Selection of crop trees among the supervitals
- Permanent crown base at 25% of the final height: no more dying back of branches at the grown base of crop trees
- Minimum distances of 12 (15) m to the next crop tree

Nature chooses on vitality –
man adds his choice on quality

Dimensionierung of Wild service

- Qualification at the age of about 20 years
- Dimensioning until the age of 60 years

…….40 decisive years for premium
Dimensioning

Further steps: Keeping the crown basis
Crown freeing until the age of 60 years every 4 to 7 years

- Maximising the crown length
- Optimising the center of gravity
- Minimising the time till target diameter
- Maximising the return on investment

Maturing phase
from 60 years till harvest

Current height growth slowing down

Crown expansion capacity slowing down

Management impact limited

Tolerance among overstorey trees
Maturing phase

Attention to

• shade tolerant trees growing up at the periphery of maturing trees
• light demand of natural regeneration
• harvest indication due to decline in timber quality
• harvest execution with regard to risk of damage to the understorey trees

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• Wild service nr. 267: in the understorey until about 60 years with mean ring width of 1.4 mm; harvest of the oak in the overstorey; mean ring width in the 10 following years: 3.6 mm
• Wild service nr. 120: in the understorey until about 95 years with mean ring width of 0.6 mm; harvest of the oak in the overstorey; mean ring width in the 30 following years: 2.0 mm