Valuable Broadleaves
an attractive investment

Tectona grandis L.
in Brazil
Mato Grosso
well-established

Robinia pseudoacacia L.
in Bulgaria
Danube-region
innovative
The calculation of the rate of return is based on:
- the relation between invested and returned capital
- the time span between investment and return

- Faster growth of trees increases the rate of return substantially.
- Slower growth decreases the rate of return drastically.

The capital market accepts only investments up to 20 years, maximum 25 years.
Poor production factors

- generally: poor soils
- often: unfavorable climate or micro-climate
- generally: unselected genetic material
- in Western Europe: high labor cost

Extensive management strategy

- minimizing capital investment
  - cheap plant material generated from seeds
  - minimal soil preparation
  - little suppression of competing weeds
  - no artificial pruning
  - narrow spacing to stimulate natural pruning
  - little intermediate cut
  - final cut after 20 to 40 years

No valuable wood assortment

- 70% fuel wood or pulp wood
- 30% for gardening, agriculture, horticulture and hydraulic engineering
- < 1% premium quality (A- and B-quality)

Rate of return

Maximal 4.5%
### Common Robinia forest

- **poor production factors**
  - generally: poor soils
  - often: unfavorable climate / microclimate
  - generally: unselected genetic material
  - in Western Europe: high labor cost

- **extensive management strategy**
  - minimizing capital investment
    - small plants from seeds
  - minimal soil reworking
  - almost no suppression of competing weed
  - no artificial pruning
  - narrow planting
  - little intermediate cut
  - final cut after 20 to 40 years

- **no valuable wood assortment**
  - 70 % fuel wood and pulp wood
  - 30 % for gardening, agriculture, horticulture, vine growing and hydraulic engineering
  - < 1 % premium quality (A- and B-quality)

### LIGNUM Robinia plantation

- **best production factors**
  - general: best soils
  - general: favorable climate / microclimate
  - general: selected genetic material
  - in Bulgaria: low labor cost

- **intensive management strategy**
  - optimizing capital investment
    - 3 to 5 m high plants from vegetative propagation (clones)
    - intensive soil preparation
    - consequent suppression of competing weed
    - regularly artificial pruning
    - spacing 5 m x 5 m
    - intermediate cut after 8 to 14 years
    - final cut after 20 years

- **valuable wood assortment**
  - 15 % fuel wood and pulp wood
  - 10 % for gardening, agriculture, horticulture, vine growing and hydraulic engineering
  - 65 % A- and B-quality, 10 % veneer quality

### Value production potential

- poorly utilized
- fully utilized

### Wood properties

- high heating value
- good fibre in high density
- durability
- (very high hardness and strength)
- (beautiful texture)
- (homogeneous structure, smooth surface)

### Common Robinia forest LIGNUM Robinia plantation

- rate of return
  - maximal 4.5 %
  - 9 to 12 %

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### Extensive management strategy
- small plants from seeds
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### Valuable wood assortment
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- 10 % for gardening, agriculture, horticulture, vine growing and hydraulic engineering
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Common Robinia forest

LIGNUM Robinia plantation

- rate of return maximum 4.5%
  - an unattractive investment

- rate of return 9 to 12%
  - an attractive investment

Robinia plantations – ecologically valuable as well?

- LIGNUM first plantation enterprise outside the tropics FSC-certified
- Robinia-Plantations exclusively only on former agricultural sites
  - cutting of existing forests is excluded as an option
- Robinia-Plantations imply qualitative ecological improvement:
  - prevent erosion by wind
  - improve the water balance
  - provide new habitats for flora
  - sequestrate carbon for a long time
- In addition an area equivalent to 25% of the plantation area will be close to nature forests:
  - mixed forests consisting of native tree species
  - moist areas
  - dry, exposed sites
Perspectives of the valuable timber markets

- Wood supply will continuously decrease.
- Development cannot be changed.
- Demand is correlated with world population by valuable wood analogical development.
- Continuous increase in prize of valuable wood.
- Substitution of tropical valuable wood by non-tropical valuable wood.
- Increasing cultivation of valuable trees in plantations, also in non-tropic regions.

Valuable wood plantations with great perspectives

- Extensively managed natural forests and semi-natural forests will remain predominant even in the future.
  - Ecologically mandatory.
  - Economically wise.
- Valuable wood plantations.
  - Can compensate for reduced supply from natural and semi-natural forests.
  - Reduce the pressure of demand from natural and semi-natural forests.
  - Can be an attractive investment.
- Non-tropical valuable tree species with increasing share.
  - Robinia pseudoacacia L.
  - Juliana regia x nigra.
  - Prunus serotina L.
  - Morus alba L.
- Basic scientific work is needed in
  - Selection / breeding of optimized clonal material.
  - Improvement of vegetative propagation methods.
  - Mathematical growth models.
Thank you for your attention

Common Robinia forest
- poor production factors
- extensive management strategies
- fuel wood, pulp wood
- low use of the value production potential
- rate of return maximum 4.5 %
- an unattractive investment

LIGNUM Robinia plantation
- best production factors
- intensive management strategies
- premium quality wood (noble wood)
- value production potential fully utilized
- rate of return 9 to 12 %
- an attractive investment