



## Silvanus Forestry Ltd.

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### Brief Company Introduction

Silvanus and Hungaroplant Kft. have been present in the Hungarian and European ornamentals production and trade market for more than 30 years. Together, along with a few other companies, they make up the Silvanus Group. During the last 20 years, the company has diversified into the forestry industry, in which it aimed and succeeded at breeding new, fast growing varieties of Black Locust with straight stem growth, as well as developing new, special cultivation technologies.

The result of decades of cultivation and research are several Black Locust varieties with outstanding qualities which make it the best variety group in the world. Our propagation material is produced through vegetative propagation, which means that the resulted propagation material maintains 100% of its qualities. All of the saplings are genetically identical (clones), unlike when trees are propagated from seeds.

Black Locust is not only one of the most common varieties in the world, but it also has extremely good quality hardwood, which makes it unique in the continental climate. With our new varieties, the otherwise 30-year rotation period can be reduced to approximately 15 years. Furthermore, our special cultivation technology ensures a defect free, valuable hardwood end product, whilst our latest research also enables rich and late flowering to increase nectar yield. It is also vital to mention that such high quality Black Locust hardwood barely even exists on the market today, as the general variety does not grow with a straight stem and therefore the industrial wood applicability of the end product is much lower.







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### **Black Locust 'Turbo Obelisk' Characteristics**

- Extreme fast growth
- Growth with a straight stem resulting higher industrial wood applicability
- Rich and late flowering to increase nectar yield
- Short rotation period of approx. 15 years (as opposed to the rotation period of 30 years of the general variety)
- Outstanding timber quality and density of the end product resulting in a wide range of applicability
- Sprouts well: same quality without replanting
- Micro-propagated variety, meaning that the clones will have guaranteed identical characteristics
- Break-even with the initial investment after only 5 years due to thinning





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## Comparison of 'Turbo Obelisk' Black Locust with other varieties, eg. Paulownia spp.

When comparing the general wood characteristics of Black Locust with other varieties used in the sector, such as Paulownia spp., the differences in wood quality, density and durability are immense. These general characteristics are what prove the incredible value of Black Locust hardwood and thus result in the wide ranged applicability of the end product.

All values are in regards to dry air conditions (u=12%)		
	Paulownia spp.	Robinia pseudoacacia L.
Density (kg/m <sup>3</sup> )	280-300-320	580-770-900
Compressive Strength (MPa)	20-25-28	166.8
Bending Strength (MPa)	31-37-41	103-136-169
Impact-bending strength (J/cm <sup>2</sup> )	1.6	12-14-18
Bun hardness (Brinell) (Mpa)	26	67-78-88
Side hardness (Brinell) (Mpa)	9	28

## Industrial Wood Production: Creating Multi-Functional Plantations with New Technologies

Value creation and thus industrial wood production is definitely the most important aspect of establishing such a plantation, however several other revenue streams can arise. The most important one of these is honey production, as Black Locust honey is very valuable. Income from such an investment can be increased by approximately 10,000 EUR per hectare over the course of the rotation period. This revenue stream can be expected starting from the 5<sup>th</sup> year, as this is when flowering and thus nectar yield becomes significant.

In addition to the above, the Agro-Forestry aspect of such plantations also needs to be examined. Our newest research shows that combining our Black Locust variety with various other species in a single plantation, such as Poplar, Oak or a great number of fruit trees, can be extremely beneficial. This is mainly due to the fact that the nitrification bacteria on the roots of the Black Locust bind more nitrogen than



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what is required by the tree itself, and therefore other neighbouring trees can also benefit from this phenomenon. As a result of this, total yield per hectare may increase by 20-30%.

Further agricultural production can also take place, as potatoes or a number of other vegetables can simultaneously be produced up to the last couple of years of the rotation period (when the canopy closes). This can be of explicit value especially when considering third world countries as the location of investment. It would not only allow for value creation, but provide food and supply jobs in the given region.

On a separate note, when comparing such an industrial wood plantation to agricultural activities on the same land, profits are incomparable. Whilst from agricultural activities profits per hectare per year are around 800-1000 EUR (on a 10-year average), if one breaks down the 12-year rotation period, the profits from a 'Turbo Obelisk' industrial wood plantation may reach 10,000-15,000 EUR per hectare per year. Furthermore, it not only creates much greater value (whilst also making use of otherwise often unusable land) but is also a lot more secure investment as it is not as easily affected by unfavourable weather conditions.

### **Methods of Cooperation**

Besides research, development and the sale of propagation material, Silvanus Forestry Ltd. is also open to various forms of cooperation with corporations and government organizations. We are most interested in signing license agreements for our varieties as well as setting up joint ventures or alternative forms of partnerships with companies who have the local knowledge and expertise in any given region. Furthermore, such industrial wood production plantations can serve as major investments for governments whom are looking to safely invest government capital such as money from pensions funds to create value, whilst also focusing on the vital fight against climate change.

Most importantly, Silvanus Forestry is looking for global partners to utilize its research findings on a global scale, as it is the only path forward for humanity in the fight against climate change.