

The intelligent tree



Paulownia GreenE

R O M Â N I A

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PAULOWNIA THE INTELLIGENT TREE (THE EMPRESS TREE)

We live on the Green Planet. Far away from outer space, it looks unbelievably beautiful. We wish to admire it minute by minute; we wish to leave it to our children, beautiful and clean, the way we want them to be. The world as we know it can be more beautiful, giving us rich resources necessary to keep us healthy, vigorous and happy. The Universe is giving us the solutions. We just have to see them, acknowledge them and use them in our benefit and for a better life.

What would it be like, for our work to generate more green plants, more beauty, less toxic residues, less expenses, less destroying and more creation, live out of all this, gain profit and give value to our lives, be appreciated, admired, praised and known for our merits?

There is a tree that grows fast, straight and glorious, has big leaves and beautiful flowers, it's light, resistant and can be processed, regenerates fast and all this can be yours!



Paulownia the Intelligent Tree

Paulownia (a tree known as the Princess Tree or Phoenix Tree) is a hardwood tree with the fastest growth in the world. If grown in proper conditions, it can reach a height up to 20 m in 3 years and also can be harvested for timber production. At least six species of Paulownia are known today: P. Elongate, P. Fargesii, P. Forunei, P. Giabrata, P. Taiwaniana, P. Tomentosa: also known as Kiri.

The Paulownia Clone in Vitro 112® and Paulownia Cotevisa 2 trees were created in a laboratory in Spain. They are cloned, hybrid trees. The main characteristics of the trees are that they are able to resist in extreme temperatures, from -30 to + 50 degrees Celsius and can be harvested for the best quality timber. Once planted, it can be harvested at least three times.

Difference between the Paulownia Clon in Vitro 112® and Paulownia Cotevisa 2:

The Paulownia Clon in Vitro 112®, because it is more mature in the moment when it is transported from the laboratory, it adapts more easily to different kind of soil types, climatic conditions, and is more resistant towards the transplantation shock.

The rest of the characteristics, the fast growths and the fine quality of the wood, are identical for both species.

The plants were given international recognition, with European passport, European quality certificate and also International trading license.



These trees plays a very important role in providing timber for furniture industry, fire wood and have many other purposes.

One of the most versatile wood plants available, Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 gained tremendous popularity in the West, where its cultivation is booming, especially for the furniture production, plywood and biomass. Known in the timber and furniture industry as "aluminum timber", Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 is 30% lighter than any comparable hard wood. Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 is resistant to contortion, resistant to shrinkage (no splits) and is generally resistant to deformation. It is beautiful, clean and smooth. It has no nodes. Its fine-grained properties make the Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 wood exceptionally suitable for boats, pallets, household furniture, plywood and prefabricated panels.

The tree regenerates naturally from existing root systems, earning a well deserved nickname Phoenix Tree. This means you can harvest between minimum 3 and a maximum of 5 generations without the need of replanting. Its leaves grow fast and have an immense capacity to absorb carbon dioxide.

Its deep root system cleans the degraded soil surfaces. Its deep roots allow also to improve soil quality and to maintain underground water. Paulownia Clone in Vitro 112® and Paulownia Cotevisa 2 are new species created, tested and recognized internationally by experts in the field, can not be multiplied; therefore it is not an invasive species, no matter where it is cultivated in the world.

Growth rate	Height	Diameter
1 year	4-5m	8-10cm
2 year	10-12m	16-20cm
3 year	15-20m	24-30cm



**Technical data of the Paulownia Clone in Vitro 112® /
Paulownia Cotevisa 2 tree:**

DENSITY: Green wood – 700-800kg/ m³
Seasoned wood – 300-310 kg/m³

COLOR: yellowish-white

HARDNESS: 1,4kN

FLEXIBILITY: 6,3 GPa

RESISTANCE ON BREAK: 42 MPa

RESISTANCE TO COMPRESSION: 20 MPa

MAXIMUM RESISTENCE AGAINST INSECTS



Characteristics and advantages of the Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 tree

The main product gained out of the Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 tree is wood. Because of its resistance and because it is light weighted, the Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 wood is suitable for furniture and upholstery inside of trailers, aircrafts and light boats. It is also suitable for obtaining wood pulp, fiber, paper and laminated beams.

The wood is semiprecious, has a very light color, it is very resistant.

Comparing it with metals, Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 can be referred to as the "aluminum" of the utility woods. 1 cubic meter of the Paulownia wood weighs about 310 kg.

It is one of the most intensively processed products, one of the most stable, doesn't bend, deform or crack.

The wood is easily processed, has a high smoothness and allows performing a large variety of finished products. Can be painted, varnished or can be added glue to it. Not easily inflammable and it is water resistant. Its texture and color are similar to the ash tree.

Because of the easy processing it is perfect for preparation of boards and cladding. Has a high capacity of isolating heat and/or cold. It is excellent in constructions as cladding and interior - exterior isolation.

The trees can be cut down after 3 years for the wood production, and after 1 or 2 years for the production of pillars. Are easily peeled (20 % easier than in case of other trees). Easily adapts to the climate and soils.



The Paulownia Clone in Vitro 112® / Paulownia Cotevisa 2 has a high degree of usage because the trees can be cut down at every three years, and used for obtaining energy or in woodworking shops.

It is a good forestry curtain for protection, the trees are very adequate for shade.

These trees tolerate all soil types, as long as the groundwater level is below 2 m, and there are no rocks to a depth of 6m. Fluid requirements are 750 mm³ / year.

The nitrogen consumption of the adult trees is estimated to 350 UF of nitrogen.

The roots are vertical, reaching up to 9 m. The width of the canopy can easily overcome 10m; this is why it is not recommended to plant Paulownia or any other trees with rich canopy near walls, constructions, water pipes or electric cables.

The leaves are large, especially in the first year of growth, having over 60 cm, which represents a great ecological help in the war against air pollution. The leaves are useful as fodder or as fertilizer, due to its high nitrogen content. Estimated absorption for 1 ha of Paulownia is 1200 t / ha / year.

Paulownia honey has a remarkable taste; it is flavored, has a light color and can be compared only with the acacia honey, having the same qualities. The Paulownia honey is also used as medicine, helps cure bronchitis and other respiratory diseases and also helps improving digestion. These properties of the Paulownia honey are due to the biologically active flower substances, which are used in food products. Honey production per ha is around 700 kg.



INSTRUCTIONS OF TRANSPORTATION AND PLANTATION OF PAULOWNIA TREE

Transportation from the greenhouses

Transportation is done at an optimal temperature of 16 degrees Celsius, the seedlings are placed in cardboard boxes, 42 seedlings per box, and it is recommended that the transportation time not to exceed 4-5 days.

When they arrive to destination, the plants have to be taken out of the boxes. Before plantation the plant should be well irrigated to stay very wet.

Conditions of the land, planting

In order to prepare the land for planting, a 30 cm good plowing is necessary, soil refining, and harrowing must be done to shred the soil.

The soil shouldn't be too viscous (if we plant in this kind of soil, we must avoid rubbing the soil around the plant).

The groundwater level has to be below 2 m and to a depth of 6 m shouldn't be rocks.

It is recommended that the land is worked properly and the weeds are removed before planting (at a minimum range of 1 sqm / plant).

- in the mountain areas, where the machines can not access the land in order to do the plowing, manual excavation is done, at least 40 cm deep, in a 60 cm range the center of the circle (plant). The soil must be watered.
- The optimal period for planting is in the spring and summer.
- It is very important for the planting to be done by specialists in this field, or at least the planting should be assisted by authorized personnel of the Paulownia Company.
- It is recommended the applying of nylon sheets of 1 sqm, these can be provided by the company, in order to protect the plant (keeps the moisture, holds water in a range of 1 sqm and keeps other plants from growing around it. This nylon sheet is highly recommended in dry areas, in order to maintain the humidity and gathering the rainwater).

Do not use unauthorized herbicides for this plant.

The plantations can be surrounded by electric fence avoiding the entrance of animals. A year after plantation, the land between the trees can be used as pasture, alfalfa, vegetables.

If security of the plantation is needed, surveillance system can be installed. Video camera surveillance costs around 800 EUR, is installed on a high pole, there are 3 cameras with infrared motion sensor powered by solar energy, and in case of movement on the supervised perimeter, records on camera and alerts the owner.

Before you order, an expert from the company will inspect the land that you wish to plant on, and will tell you if it's worth investing or not.

The plantation is done by our team supervised by an expert, and it costs 500 EUR / ha. The agricultural land must be prepared, plowed and soil refining has to be done, especially if it was fallow ground. After inspection, will be determined in agreement what works need to be done in order to prepare the land for the plantation.

During plantation the land must be watered abundantly, it needs 2000l water / ha; water is put in the hole and after the plantation as well. It is recommended to use a dark colored nylon, suppressing the water. In case of droughts, the plantation has to be watered every 7 days for 4 weeks, until the plant attaches and starts to grow. If planted correctly and watered as described above, there is 100% chance the plant will attach to the ground and grow.

The fact that these trees will regenerate 3 times is guaranteed, therefore every three years is cut. It can be harvested at least 3 times.



**FOR ADDITIONAL INFORMATION PLEASE CONTACT THE SPECIALISTS
OF THE PAULOWNIA COMPANY.**

