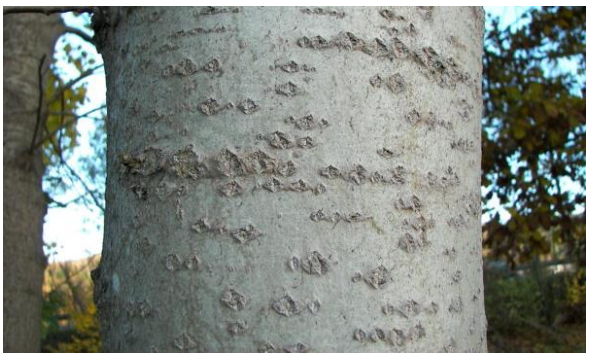
THE HIGH CONTRIBUTE OF THE PAULOWNIA TREE TO FACE CLIMATE CHANGE

Originally coming from China and widely used for its high aesthetic value, its large leaves and striking violet flowers, the Paulownia tree is gaining a new popularity for its extraordinary contribution to the environment.

Studies made on its features have proved the capacity of this tree to capture 10 times more carbon dioxide than a normal tree: it removes the greenhouse gases and produces more oxygen than other plants.

Traditionally cultivated in the regions of Anhui, Gansu, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Liaoning, Shaanxi, Shandong, Shanxi, N Sichuan in China, then its production spread in Japan, Korea, North America, Europe, and other countries.

Present debate at international level about climate changes and the need to reduce the greenhouse effects, pollution and desertification, make the Paulownia tree a real environmental resource to be invested in different contexts.



In addition to its ability to absorb CO2 10 times more than other tree species, the Paulownia tree has several other characteristics valuable for the environment and local development.

- It enhance the recover, the control and balance soil erosion, thanks to its deep roots system and its capacity to hold the Co2. It purifies the ground thanks to its leaves, rich in nitrogen, which bring nutrients when falling and decomposing in the soil. It increases, more than other tree species, the permeability of the soil and their water retention. It allows to save water compared to other trees thanks to its speed of growth: it uses water in its first two years and then does not need irrigation. It represents a good solution to recover soils impoverished or contaminated by intensive agriculture or by environmental disasters.

- It is a species remarkably resistant to pests and diseases thanks to the low content in oils and resins. It tolerates droughts and survives wildfire very well. One of its main qualities is the ability to resist to extreme aggressions, such as fire, as it can regenerate its roots and growth vessels quickly, even on almost arid grounds. Due to its capacity to regenerate soils it facilitates the growth of even different local species.

- Paulownia is an extremely fast-growing tree. It can grow 6 meters in one year and reach 27 meters of height. The cutting down of the trees is done at ground level and from the same root can grow another tree. The tree can regenerate up to 7 times and the life of a healthy Paulownia plant can be of 80-100 years. Its fast growing makes it ecologically functioning as a pioneer profitable plant. Its wood is precious for being resistant and light, it is considered like the aluminium of the woods. After 2 years it can be sold to produce paper and after 4 years it can be sold to produce furniture. Its wood can be used as insulation of cold and heat due to its low thermo-conductivity.

- Another contribution to the environment is represented by the use of Paulownia wood in the generation of biomass for thermal power plants or home heating by the transformation into pellets. Paulownia pellet has neutral CO2 emissions and is an excellent solid biofuel in substitution or complement of carbon and fuel-oil. It is estimated that 2 kg of pellets are equivalent to 1 litre of diesel, reducing of 50% the cost per unit of energy.

- The Paulownia tree produces leaves of 40–60 cm long, rich in proteins that fertilize the arid soil with its nutrients, or can be a fertilizer for other plants, producing compost. They have a very high nutritional value and are used for feeding livestock, while Paulownia flowers can be used to produce honey.

The physiological characteristics of this tree make it able to adapt to a great variety of climates. In different countries of the world are being installed nurseries of Paulownia in order to use this resource in forestry initiatives to face the climate change and desertification and in general for the improvement of soils.

To know more

Paulownia in Wikipedia

Paulownia in wikiwand.com

Paulownia in efloras.com

Arbolkiri.com website

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