REFORESTATION FOR AFRICA

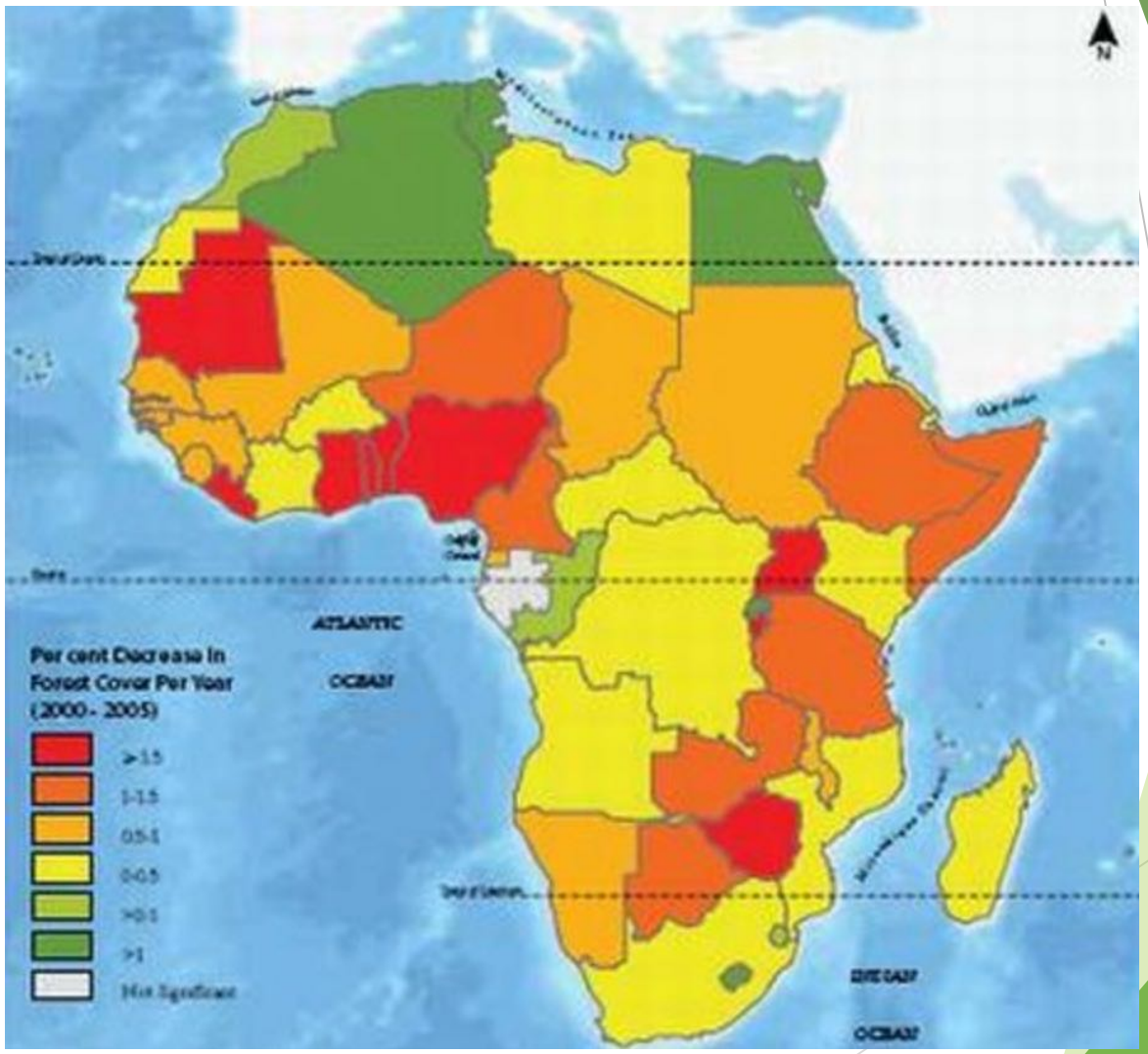
Phil Cruver, Founder & CEO
phil@regenbiomass.com
562-544-7410
www.regenbiomass.com

TIMBER & CARBON FARMING INDUSTRY FOR AFRICA

- Regenbiomass (The Company) exists to develop regenerative biomass farms for reforestation, producing lumber, and creating carbon credits to combat climate change.
- The Company intends to develop *Paulownia* tree farms in Africa for producing high-quality timber uniquely branded as sustainable for the massive market of eco-conscious consumers concerned about climate change and seeking investments for decarbonizing our planet.
- *Paulownia* is the fastest growing tree on the planet reaching 20 feet in the first year and can be harvested for timber in the fifth year.
- The Company has partnered with WeGrow in Germany, the leading *Paulownia* farm developer, for transferring know-how, proven technologies and techniques for de-risking the investment.

DEFORESTATION CRISIS IN AFRICA

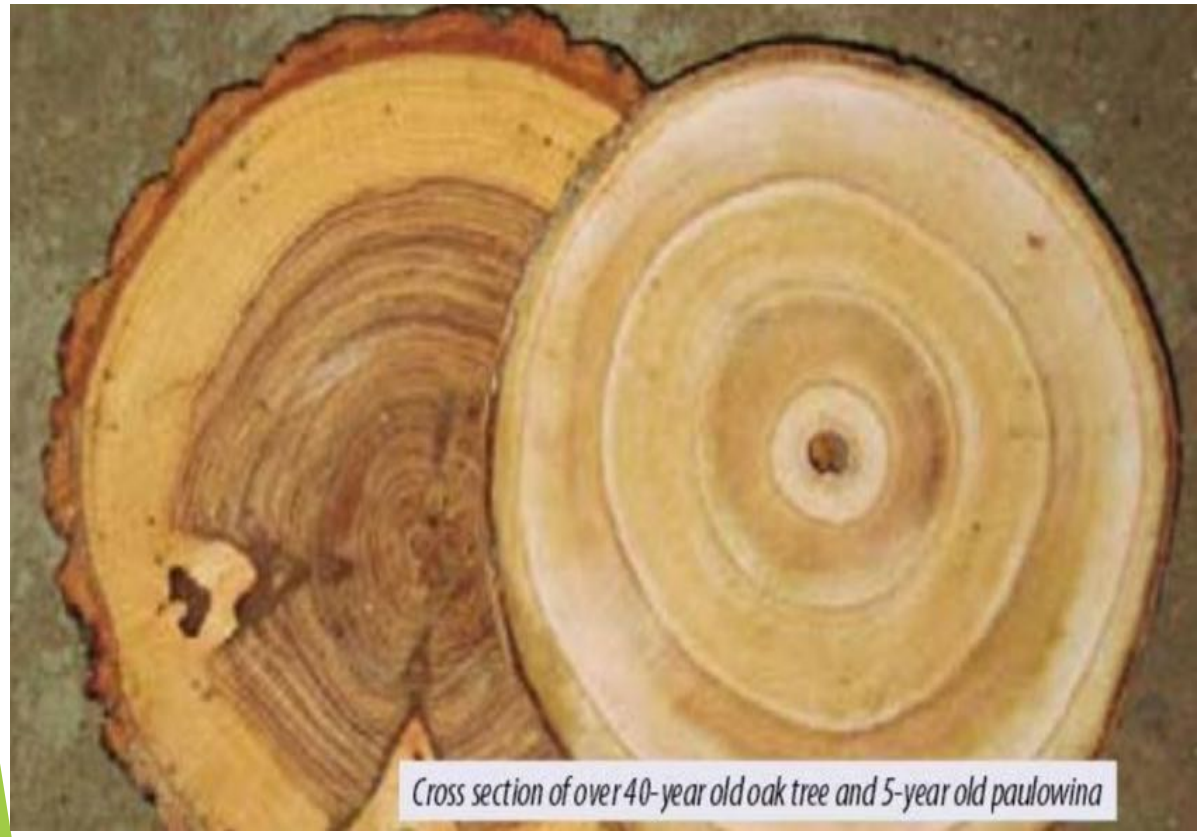
- Of the 10 countries in the world with the largest annual net loss of forested area, six are in Africa which loses an average of 40,000 square kilometers of its forests annually.
- In Africa, the statistics are striking: an estimated 90 percent of the entire continent's population uses fuel wood for cooking.
- An estimated 20 to 25 percent of annual deforestation is thought to be due to commercial logging. The remaining 15 to 20 percent is attributed to other activities such as cattle ranching, cash crop plantations, and the construction of dams, roads, and mines.
- Some areas across the African continent are losing over 50 metric tons of soil per hectare per year.



RESTORING AFRICAN FORESTS

- **According to the UN Food and Agriculture Organization (FAO), indigenous (also known as "old-growth") forests in Africa are being cut down at a rate of nearly 10 million acres per year about twice the world's deforestation average. These losses totaled more than 10 per cent of the continent's total forest cover between 1980 and 1995 alone.**
- **There are millions of acres of deforested lands in Africa that could be developed as *Paulownia* farms for producing valuable commercial lumber while also curbing climate change by sequestering CO_2.**
- **It is estimated that *Paulownia* trees can sequester about 50 tons of carbon per acre per year. 10,000 acres of *Paulownia* farms would amount to about 500,000 tons of sequestered CO_2 annually that would be permanently stored in lumber.**

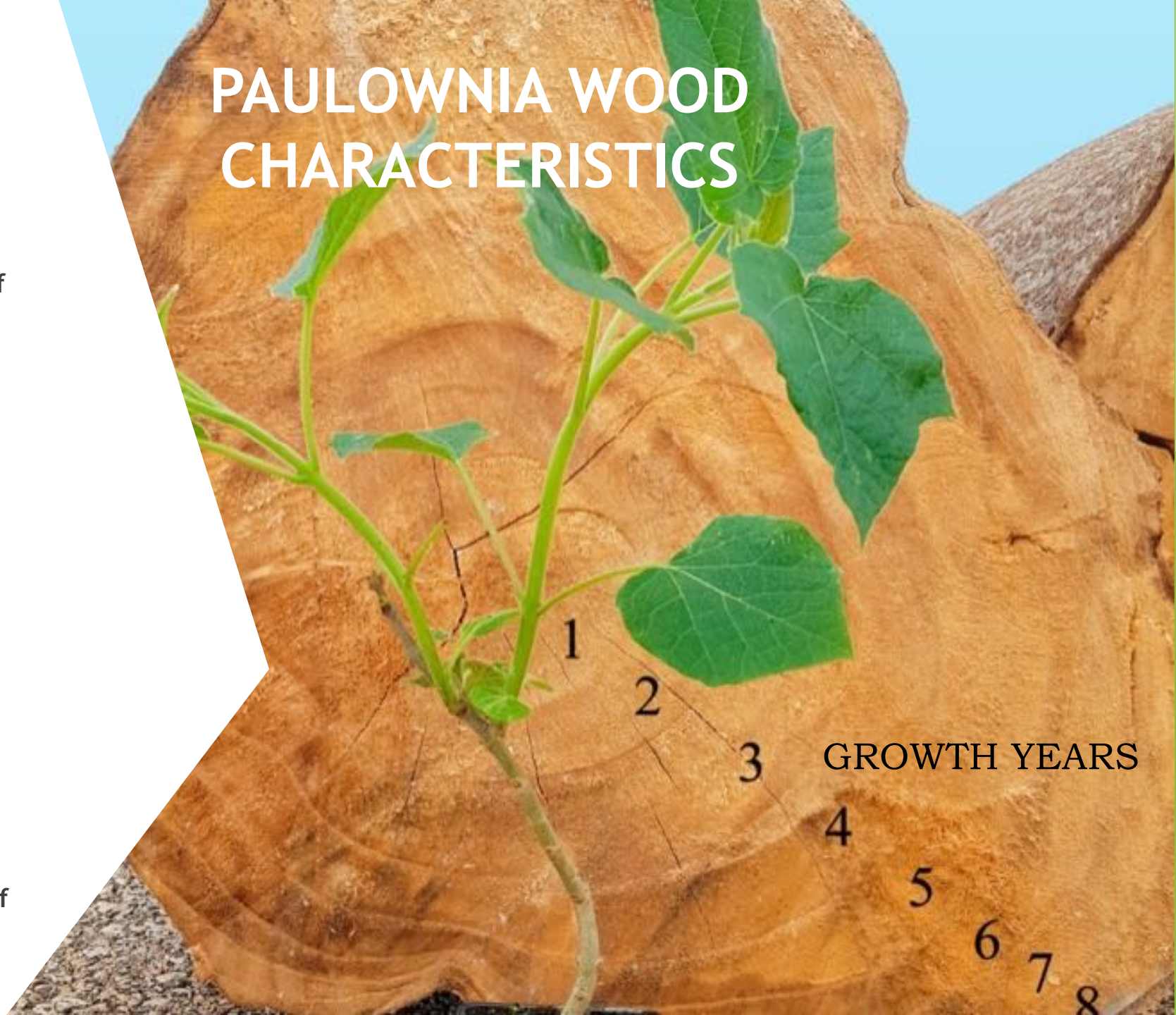
REGENERATIVE TIMBER INDUSTRY



- *Paulownia* tree farms for reforestation projects and producing sustainable timber and lumber is a unique opportunity for Africa.
- *Paulownia* is the fastest growing tree in the world. In the first year it can grow up to 20 feet and produce as much wood volume as an oak in 1/10th the time. The harvest cycles are comparatively short capable of being harvested in five years.
- While other trees can only be harvested once, *Paulownia* sprouts immediately from the stump for future harvests every five years.

PAULOWNIA WOOD CHARACTERISTICS

- With a weight of around 280 kg/m³, it is lighter than most woods. In comparison: oak weighs around 770, beech 720, pine 480 and spruce 450 for saving transport and energy costs.
- With a thermal conductivity of only 0.09 W/mK, it stores a lot of air in vacuoles and therefore insulates more than twice that of oak or beech wood.
- It does not require replanting as after each cutting (coppicing) the trunk regenerates for cyclical growth with a life span of up to 100 years.
- It is twice as resistant to fire (400C°) as other trees and insect resistant due to a high content of tannin.
- It can grow on marginal lands requiring far less water and fertilizer than forest trees. There are hundreds of thousands of *Paulownia* trees producing timber from plantations in Egypt where the temperatures reach over 120 degrees.
- It can bind up to 50 tons per acre of CO2 from the atmosphere every year. That is about five times the CO2 capacity of a mixed forest. This is mainly due to the large leaves, which can reach a diameter of up to 4 feet.



PAULOWNIA WOOD TECHNICAL SPECS

- **Tree Size:** 30-65 ft (10-20 m) tall, 2-4 ft (.6-1.2 m) trunk diameter
- **Average Dried Weight:** 18 lbs/ft^3 (280 kg/m^3)
- **Specific Gravity (Basic, 12% MC):** .25, .28
- **Janka Hardness:** 300 lb_f (1,330 N)
- **Modulus of Rupture:** 5,480 lb_f/in^2 (37.8 MPa)
- **Elastic Modulus:** 635,000 lb_f/in^2 (4.38 GPa)
- **Crushing Strength:** 3,010 lb_f/in^2 (20.7 MPa)
- **Shrinkage:** Radial: 2.4%, Tangential: 3.9%, Volumetric: 6.4%, T/R Ratio: 1.6

Source: THE WOOD DATABASE

CALIFORNIA PILOT PROJECT

- The Company developed a pilot project in Southern California, funded by a USDA grant in 2022, to gain experience and real-world data for launching a "Timber & Carbon Farming Industry" throughout Africa.
- The Company purchased 800 4th generation hybrid and sterile (no invasive species issue) *Paulownia* plantlets from WeGrow in Germany, which has 35 plantations that have been producing lumber from ¼ million trees across the globe for the past 12 years.
- This Pilot Project is a showcase for the potential of Timber & Carbon Farming as a regenerative and resilient new green industry that can be applied for reforestation projects in Africa.