



# PAULOCARBON

**Agroforestry & Energy Income  
from Paulownia**

by Robert W Jankowski & Magda Radke

# Welcome to PauloCarbon

**Agroforestry meets energy and climate finance.**

**In a world facing climate disruption, water scarcity, and declining farm profitability, PauloCarbon offers a nature-based, profitable solution:**

**Fast-growing Paulownia trees planted on idle or intercropped farmland deliver timber, biomass, and carbon offsets – while regenerating soil and protecting crops from drought.**

**We empower farmers to earn more, protect their land, and participate in the carbon economy – all through scalable, science-based agroforestry.**





# The Problem

- Traditional farming is economically unstable due to fluctuating crop prices and climate risks.
- Drought and soil degradation reduce yields and profitability.
- Farmers lack access to carbon markets and decentralized energy solutions.
- Unused land remains idle while carbon farming potential is unused.

# Our Solution

**PauloCarbon is an integrated agro-climate-energy model combining:**

- 1. Paulownia plantations for:**
  - Fast-growing biomass (2–3 years) for energy,**
  - High-value construction-grade timber (8 years),**
  - Shade and water retention benefits.**
- 2. Biomass valorization via GreenFlame gasification: syngas + biochar.**
- 3. Carbon credits from CO<sub>2</sub> absorption, sequestration in roots, timber and biochar.**
- 4. Water resilience – Paulownia reduces crop drought stress by increasing local soil moisture and rainfall retention.**



# Key Benefits



- **Fast ROI: biomass harvest every 2–3 years; timber after year 8.**
- **Climate resilience: improved soil structure and drought resistance.**
- **Energy generation: direct use or sale via GreenFlame units.**
- **Carbon revenue: measurable, certifiable offsets.**
- **Soil health & biodiversity: strong root systems prevent erosion, support soil microbiome.**
- **Multistream income: biomass, timber, energy, carbon, honey (optional).**

# Market Opportunity



- **2M+ hectares of idle land in Central & Eastern Europe.**
- **Paulownia absorbs 75 tons/ha/year for a 3-year rotation; for an 8-year rotation, a lower yield can be assumed – 60 tons/ha/year.**
- **EU push for regenerative agroforestry and nature-based solutions.**
- **Carbon credit markets: €40–100 per tCO<sub>2</sub>, growing rapidly.**
- **Rising demand for lightweight, fast-growing hardwood for construction and furniture.**

# Business Model

## Revenue streams:

- **Sales of planting kits + technical support to farmers.**
- **Energy partnerships via biomass-to-syngas conversion (GreenFlame integration).**
- **Carbon credit aggregation and resale via verified registries (Gold Standard, Verra).**
- **Timber harvesting and B2B sales (construction, furniture).**
- **Biodiversity and soil carbon financing (impact investors, EU funds).**
- **Optional: honey production from Paulownia-flowering agroforests.**



# Farmer Revenue Potential

## Annual income per hectare (estimates):

- Carbon credits:  $75 \text{ tCO}_2 \times €40-100 \rightarrow €2,800-€7,000/\text{year}$  in a 3-year rotation
- Timber (averaged):  $€12,000 - €72,000$  gross revenue per hectare over 8 years
- Wood chips : managing 1ha in a 3-year cycle can supply 90–180t of wood chips;  $€5,000 - €14,000$  per hectare (per 3-year cycle)
- Biogas on 3-year biomass yield per hectare (90–180t dry wood chips), the estimated output through gasification is:

Min est.:  $\sim 198,000 \text{ Nm}^3$  of syngas – Max estimate:  $\sim 630,000 \text{ Nm}^3$  of biogas; by sells 100% of the biogas, the annual revenue:

Min estimate:  $€16,500$  per year – Max estimate:  $€84,000$  per year

**Total est. range:  $€ 15,000 - €42,000/\text{ha/year}$**

- Honey (optional):  $500 \text{ kg} \times €10 \rightarrow € 5000/\text{year}$



# Traction

- Pilot Paulownia plantations active in Poland.
- Water retention and carbon performance verified on test plots.
- Strong farmer and municipal interest for degraded land conversion.
- Integration-ready with GreenFlame bioenergy system.

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## Contact us for more details

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**Let's grow profit from the ground up.  
Invest in trees, energy and carbon. Harvest impact and returns.**