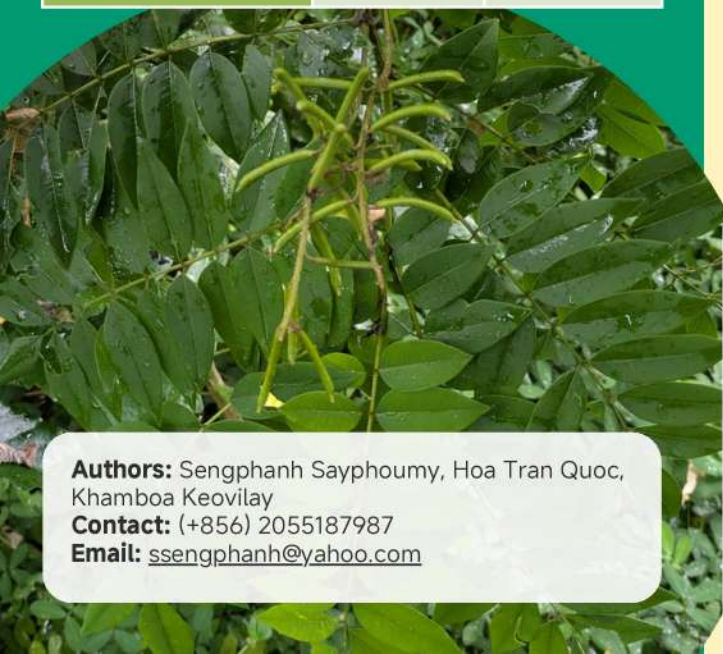


The propagation method to adopt will depend first on the availability of the vegetal material (seeds or cuttings).

Although propagation from seeds requires (i) careful attention after sowing for a better germination and (ii) careful handling of young seedlings during the transplantation to plastic bags, our experience shows that this method is more effective and less labor-intensive.

	CUTTINGS	SEEDS
Required labor for preparation	Higher	Lower
Seedling mortality in nursery	Higher	Lower
Growth Speed	Rapid post-transplant	Slower initial growth
Time required before planting in the field	60-75 days	60 days
Time before producing seeds after planting in the field	Less than 1 year	2 years



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Gliricidia sepium is a fast-growing, nitrogen-fixing leguminous tree, highly valued for its adaptability in Northern Laos. It could serve as a resilient live fence, or intercrop, delivering multiple ecosystem services with minimal input—making it a cost-effective and sustainable agricultural solution on degraded, and acidic soils.



KEY BENEFITS IN AGROFORESTRY

In coffee and tea plantations, Gliricidia acts first as an effective shade tree. Regular pruning creates a moderate, filterable canopy that: mitigates heat stress, reduces evaporative demand, protects against sunscald. As a Fabaceae, it enhances soil fertility through symbiotic nitrogen fixation, returning nutrients via leaf litter and pruned biomass. Its coppicing ability ensures a continuous supply of green manure, stakes, and fuelwood. Adaptable root systems and resprouting capacity allow flexible integration with coffee and tea bushes, enhancing vigor, stabilizing yields, and building resilience against drought and heat.

Grow Sustainably, Eat Healthy
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Agroecology and
Safe Food System
Transitions



A TECHNICAL GUIDE:
Propagating & Integrating
Gliricidia Sepium
in Diversified Perennial
Crops-based Systems

I. Propagation Methods



1. FROM CUTTINGS

- **Collection** period: January to May
- Choose **healthy branches**:
 - diameter of 0.5–1.0 cm
 - length of 10–15 cm.
- **Soak cuttings** in rooting hormone overnight.



- **Bed setup**: Use wooden boards (10 cm tall) and fill with a 50:50 mix of agricultural soil and sand.
- **Planting cuttings** 2–3 cm deep, spaced 1 cm apart then watering the soil immediately.
- **Covering cuttings** with white plastic (30 cm high) to maintain humidity.
- **Water** once weekly for 30–45 days until roots and leaves develop.



- **Move rooted cuttings to plastic bags** filled with a soil mixture composed by sand (1/6), charred rice husk (2/6), and agricultural soil (3/6).
- **Nursery care**: place bags in a nursery plot and water daily.
- **Seedlings are ready to be planted after 30 days** in the nursery (at least 20 cm tall).



2. FROM SEEDS

- **Collection** period: December to January.
- **Sowing medium**: fill a plastic pots with agricultural soil then sow the Gliricidia seeds evenly and water immediately (in Jan/Feb).
- **Covering** by using white plastic to retain moisture.
- **Maintenance**: water twice weekly until germination (~15 days).



- **Prepare the soil mixture** of plastic bags composed by sand, charred rice husk, and agricultural soil, same ratio as for cuttings
- **Transplanting**: move the seedlings (4–5 cm tall, ~30 days old) to plastic bags.
- **Nursery care**: place bags in a nursery plot and water daily.
- **Field Readiness**: Seedlings are ready to be planted in the field after 60 days (30 days post-sowing + 30 days in nursery).
- **Seedlings** are less than 20 cm tall without branches.



II. Planting & Management

Gliricidia seedlings should be planted in the field:

- At least when **20 cm tall**
- **Early as possible** before planting coffee or tea
☞ **1 year before** to provide adequate shade
- Best period: from June to September
- Distance of 8m X 8m (**~ 160 seedlings per hectare**) if **several species** (e.g., coffee + fruit trees).



Proper management, including pruning the Gliricidia is crucial for success:

- **Prune Gliricidia regularly** to a height that provides the right shade amount for coffee trees (~ 50–60% of shade for Catimor var.).
- **Remove the lower limbs** to foster a more upright growth habit ☞ umbrella effect.

