Expanding tree farming options for smallholders in North Lampung

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1. Previous activities in the area

- University of Brawijaya 'biological management of tropical soils’ work
- ASB characterization of land use and diagnosis of farming constraints
- Homegarden inventory of carbon stocks and tree species
- Informal discussions with individual farmers and farmer groups regarding tree farming

2. Establishment of activities to ‘Expand options for smallholder farmers’

List of timber taxa in trials

- Acacia mangium – mangium local
- Acacia mangium – mangium super
- Alstonia scholaris – pule
- Eucalyptus hybrid – eurograndis
- Paraserianthes falcataria – sengon
- Peronema canescens – sungkai
- Swietenia macrophylla – mahoni
- Tectona grandis – jati local
- Tectona grandis – jati emas
- Tectona grandis – jati super

Initial finds from trials

- All taxa show good survival under smallholders’ conditions
- Trees planted under established cassava demonstrated 35-40% less height growth compared to trees planted simultaneously with cassava (through a rotation of cassava)
- Intercropping with short stature and short rotation crops (legumes and maize) results in better tree survival and growth compared to intercropping with cassava
- Weed control is necessary to minimize the competition from Imperata and companion crops, particularly when using fertilizers. Survival and height growth were 10% and 30% less, respectively, when weed control was not conducted.
- Based on a compilation of early data (less than 1 year) relative height growth between species is as follows: first Paraserianthes; second Acacia mangium, Eucalyptus hybrid and Alstonia; third Swietenia; and Peronema and last Tectona.
- Based on 4-month data, improved quality germplasm demonstrates superior height and diameter growth compared to local germplasm – 80% greater for Tectona and 13% greater for Acacia mangium.

Timber rotation categories - smallholder criteria

Short rotation (5-10 years)

Acacia mangium, Eucalyptus, Paraserianthes falcataria

Medium rotation (15 years)

Alstonia scholaris

Long rotation (+ 20 years)

Peronema canescens, Tectona grandis, Swietenia macrophylla

3. Related and future plans

- Marketing study for timber produced by smallholders
- Training related to ‘fruit and timber tree propagation and management’
- Training on ‘seed source management and seed collection’
- Evaluation of fruit and timber tree germplasm pathways
- Evaluation of preferred planting niches for fruit tree
- Compile list of on-farm and priority tree species
- Facilitate the development of a smallholder tree farmers group