

High ecological and economical value of Animals rarely seen in agroforestry system probably due to limited food availability and/or high hunting activity

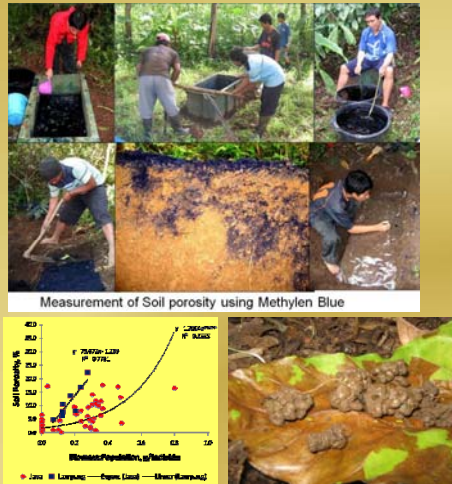


### RESULTS

### CONCLUSIONS

**FERTILE SOIL BASED ON FARMER PERCEPTION**  
Black soil, contain a lot of humus like forest soil, pH > 5, high density of earthworm, easy to be cultivated, good plants growth and looks green

**The role of earthworms in soil porosity is INVISIBLE and not represented in farmer knowledge!**



Effect earthworm size *Pontoscolex* on soil porosity. High earthworm cast production indicates fertile soil with a good soil porosity.

### VALUE of coffee AF system      THREAT

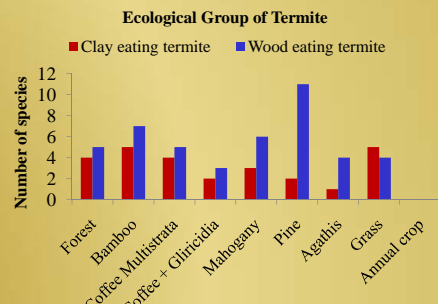
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| <ol style="list-style-type: none"> <li>1. Generate income continuously without reducing soil fertility and low fertilizer application and other chemicals used</li> <li>2. Maintaining hydrological function of watershed and protecting water spring which needed by community and by hydropower (PLTA) Selorejo</li> <li>3. Home for many plant and animal species, but sensitive fauna and flora to fragmentation will not survive.</li> <li>4. Maintaining belowground biodiversity and its function, BUT little known by farmers due to invisible without microscopic and limited information.</li> </ol> | <ol style="list-style-type: none"> <li>1. The natural forest lost is very high a 2.2% per year (or 161.2 ha/year) and the total area of annual crop a 10% per year increased (or 41.8 ha per year).</li> <li>2. Less integrated Policy development at district level</li> <li>3. Conflict of interest in agroforestry system. Number of fauna recognized as pest in agriculture system but they have high economic value, it may enhance hunting activity</li> </ol> |
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### OPPORTUNITY

Good support from state forest company (PERHUTANI) by allowing community planting other tree species rather than timber species within "hutan lindung" (protected forest). Potential to develop Ecotourism

**Farmer perspective: Termite is PEST, and destroy wooden house construction**

**Not all termites are PEST**



*Odontotermes grandiceps*  
Wood eating termites, potentially appear as a pest, highly found in Agathis plantation,



*Hospitalitrmes hospitalis*, lichen eating termite, bio-indicator of undisturbed ecosystem, NOT found in Kali Konto