

# Productivity improvement by pepper as an intercrop in tea and coconut

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## **Abstract**

Black pepper is one of the main export oriented crop in Sri Lanka which is cultivated over 30931 hectares. In 2010, 12218 MT of pepper was exported and earned 42.65 US \$ Million. Tea and coconut are the main commercial crops of Sri Lanka. All these crops are mainly grown in wet or intermediate zones which permit intercropping tea and coconut plantations with pepper to improve productivity of the land and the crops.

*Gliricidia* (*Gliricidia sepium*), on which the pepper vines are trained, provide a large quantity of biomass through regular lopping and pollarding of branches. It also helps to cut down solar radiation and reduce ambient temperature thereby creating micro climate for the intercropped crops. One of the main benefits of intercropping of pepper on *gliricidia* is the increased soil fertility. Studies revealed that physical, chemical and biological properties improved by incorporation of *gliricidia* foliage in to the soil as a green manure. Reduction in fertilizer cost is another beneficial factor derived from this intercropping system. Research studies showed that tea/pepper intercropping system increased the income of tea lands by 33%. Coconut/pepper intercropping system increased the nut production in coconut plantations by 20%. These intercropping systems increased the land value by 8-115% (Depending on the locality). It is one of the best solutions for suitable land scarcity for pepper in Sri Lanka.

Finally it can be concluded that rationale for the adoption of intercropping systems with pepper is that the productivity and income per unit area of land would be raised considerably, largely by efficient management of available resources and minimum use of external inputs without depleting the natural resource base. It also reduce the dependence on single crop and acts as a good crop insurance. The Government of Sri Lanka is encouraging farmers to follow intercropping systems by introducing various subsidy schemes.