

## Management of leguminous cover crops to improve soil fertility in central Amazonia

Rodrigues, Maria do Rosário <sup>(1)</sup>; Beck, Ludwig <sup>(2)</sup>; Dias, Miguel <sup>(1)</sup>; Förster, Bernhard <sup>(3)</sup>; Garcia, Terezinha <sup>(1)</sup>; Garcia, Marcos <sup>(1)</sup>; Hanagarth, Werner <sup>(2)</sup>; Höfer, Hubert <sup>(2)</sup>; Martius, Christopher <sup>(4)</sup>; Römbke, Jörg <sup>(3)</sup> and Xavier, José Jackson <sup>(1)</sup>

<sup>(1)</sup> Embrapa Amazônia Ocidental, Brazil, <sup>(2)</sup> Staatliches Museum für Naturkunde Karlsruhe, Germany, <sup>(3)</sup> ECT Oekotoxikologie GmbH, <sup>(4)</sup> Center for Development Research – ZEF, Germany

The agricultural practices used in some Amazonian ecosystems are characterized by a continuous cropping which results in soil fertility decline over time. Experimental studies have been initiated in cropping systems near Manaus, Brazil, to evaluate the effect of legume mulch for recovery of soil fertility in a mixed plantation of coconut and cupuaçu perennial trees. Two leguminous shrub species (*Tephrosia candida* and *Flemingia congesta*) and one prostrate species (*Pueraria phaseoloides*) are cultivated in form of alley cropping between the coconut and cupuaçu trees. Prunings of this species are applied to the soil as mulch near the perennial trees. Afterwards, variables such as input of organic matter and physical and chemical properties of the soil will be compared with areas where no mulch was applied.