

Recultivation of degraded, fallow lying monocultural areas with equilibrated polycultures under special respect to soil microbiological factors

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Degraded fallow areas of primarily monocultural plantations will be transferred into a locally-adapted form of utilization under special consideration of soil microbiological factors (fungal and bacterial symbionts). In accordance with the heterogeneity of natural plant communities, polycultures of several perennial and annual ecologically adapted useful plants are installed. During the installation phase mycorrhizal fungi are introduced as important biological factors to optimize the ecological fitness of the plant material. After the implantation of the polyculture the spontaneous secondary vegetation is managed carefully to reach to a beneficial jointly growth of the secondary vegetation with the useful plants. In this type of naturally enriched polyculture special regard is paid to a careful use of pesticides and fertilizers in order to come to a plant production system with low input and sustaining medium output. Low input systems with a mixture of annual and perennial plants result in an ecologically and economically equilibrated situation for small scale producers. In this contribution the organization of a multidisziplinary project between Brazilian and German institutions is demonstrated as well as the results of the installation phase of the project.

