



BOLIVIA

NATIONAL STUDY

# THE DYNAMIC AGROFORESTRY METHOD

The “dynamic agroforestry” method (DAF) is an innovative progression of agricultural cultivation combined with agroforestry. The method is based on the knowledge of the indigenous peoples of Latin America structured and combined with agriculture by the Swiss Ernst Götsch in the 1980s and 1990s. In the 90s, the Deutscher Entwicklungsdienst (DED) in Bolivia among others promoted its development. In the last 5-10 years, several research projects started and a growing interest in that method.

DAF constructs natural forest-like systems with high biomass production and which supply as side effect a large variety of products for humans. DAF specifically uses cutting of the plants to keep the forest system at a youthful state and thus to promote increased biomass production.

## DEVELOPING THE DAF METHOD

Research began in 2005 to discover this method. First results showed that the DAF method uses certain natural mechanisms that have been used in agriculture: diversity, density, intersection, etc. In February 2017, a study concluded that maize grows better when mycorrhiza are present in the soil. This result makes it clear that there are synergy effects between plants which have not been considered in conventional cultivation but have great potential to make cultivation more sustainable and more profitable than other methods. Another advantage of DAF is that the method can be used in almost any kind of soil in every climate zone. Degraded soils can be made fertile again with DAF in a comparatively short time.

See photos below

## POTENTIAL OF DYNAMIC AGROFORESTRY

DAF has great potential in the following areas:

1. To improve the living conditions of many small-scale farmers;
2. Restore natural habitats and build natural buffers around protected areas, and
3. Adapting to the consequences of climate change such as changes in rainy season, longer drying phase or exceptional storms.

In addition, DAF has the potential to store carbon in the soil for a long time (up to 1 000 years and more) thanks to the high biomass of the system combined with the use of biochar in the soil, while the humus content and thus the soil fertility increase. This makes DAF not only one of the best answers to the aforementioned challenges, but could be one of the key factors to slow down or even reverse climate change.

## SCALING AND SPREADING DAF

Since 2011, Naturefund uses DAF very successfully in various projects in different countries and ecosystems: Honduras, Nicaragua, Madagascar, Bolivia and various locations in Europe. This method is the best reforestation method that we have thus far found, as it offers farmers stable revenues, improves the soil and creates a system of diverse plants. These forests are usually “close to nature” and offer a habitat to numerous species. Naturefund set its sights to informing people about this method, building up a database for the existing knowledge and implementing dynamic agroforestry worldwide in its various reforestation projects. Additionally, we planned a simple DIY kit that should enable smallholder farmers as well as non-governmental organisations working in the same area to introduce dynamic agroforestry on their lands.

