



Improving traditional systems of soil fertility

Improving traditional systems of soil fertility to increase quality agricultural production in the Savannah region of Togo (Oti and Tandjoar districts)

The project is a response to land degradation in the Savannah region and its impact on agricultural production. The area suffers from overexploitation of natural resources, particularly forest products, linked to human activities. The result of these activities is the destruction of vegetation, leaving the soil bare and highly eroded. The combined effect of declining soil

fertility, linked to the destruction of vegetative cover, and unpredictable rainfall, caused by climate change, is the gradual decline of agricultural production causing poverty in local communities.

Farmers are trying to reverse this misfortune by making use of chemical inputs to fertilize their farms and fight against pests. But this does not seem to be a sustainable solution. Production is gradually decreasing from year to year, although the amount of fertilizer applied is the same.

THE PROJECT

The location of the project

The project covers two districts of the Savannah region in Togo: Tandjouaré and Oti.

The size of the operation

The initiative covers many areas, but the focus was on two lowland sites of 5 hectares (ha) in total. The sites were selected for the promotion of agroecological cultivation of rice in the rainy season and organic market gardening in the dry season. Producers are supported through the process of reconversion to ecological agriculture.

Beneficiaries

The activities involve more than 1,500 producers, of which 67% are women, divided into seven groups.

The problems identified in the project

The project has identified the following problems:

- Soil degradation due to environmentally damaging farming practices;
- Food insecurity leading to malnutrition and undernourishment;
- Lack of financial autonomy especially among women and young people.

Objectives

The project aims to:

- Make local people aware of the harmful effects of the use of toxic chemical inputs on the environment, biodiversity, ground water, ozone layer, and farmers' autonomy;
- Sustainably increase agricultural production by preserving nature;
- Improve the health of local populations through better diets.

Solutions proposed

The solutions offered by the project are:

- Implementation of best practices to substantially improve the incomes of seed producers;
- Capacity building of farmers and women producers (1500 in total) on organic manure and its impact on the sustainability of soil fertility;
- Implementation of rice cultivation in the lowlands through effective production and market-gardening techniques;
- Protection of plant biodiversity through the implementation of a botanical garden.

Project strategy

The strategy is based on the cooperative approach to meet the new legal requirements for farmers' organizations and to facilitate access to markets. A key part of the project strategy to reorient farmers to agroecology is to use examples of health problems that emerged with the advent of toxic chemical inputs. This helps to spread awareness of the risks linked to the consumption of products from conventional agriculture.

Gender and social inclusion, with a focus on women's access to land, are also key considerations of the project.

Project resources

The resources are primarily local, consisting of indigenous knowledge relating to good agricultural practices and community involvement in the project. The project is also supported by grants from partners.

Benefit of the project

The initiative helps to ensure food sovereignty in grassroots communities. It also strengthens social cohesion at the local level because the activities are implemented with a community spirit. The project facilitates access of women, youth and marginalized people (living with disabilities) to land and decision-making. Finally, it allows producers to renew their links with nature, to regain the lost partnership between humankind and nature.

The results obtained

Through awareness raising sessions and trainings, 1,500 beneficiaries have adopted traditional techniques of soil fertility conservation and management. Hundreds of compost pits have been dug. The technique of using Mycotri fungus has helped boost the production of compost, improving existing practices in the area. An agroecological field for the production of Sorvato1 seed (an improved sorghum variety) has been installed and is being monitored. Through fertilization of the field with compost and soil conservation practices, such as stone lines, productivity has risen to 3 tonnes/ha. This success has helped the system to spread throughout the area.

To accompany producers in the implementation of agroforestry practices, 24 nursery growers were trained and equipped. Eleven nursery sites have been installed for this purpose, with 20,000 fertilizer plants. Seedlings were distributed to beneficiaries for the reforestation of their plots.

To help promote the production of rice and quality vegetables, a site of 5 ha of lowland has been established and set up to benefit local populations. Two solar-powered boreholes supply the site with water in the dry season for vegetable growing. Rice production, using SRI (System of Rice Intensification), takes place in the rainy season.

Finally, a botanical garden of 5 ha was selected and enriched with local, endangered species. This initiative aims to conserve species of the Savannah region for future generations. The garden is also being used for conducting tests on some local leguminous species for soil fertilization.

Impacts of the project (local and national)

The initiative has gained the trust of producers. There was a particularly strong uptake of organic manure in the project area. As part of the conservation of biodiversity, some forgotten crops such as sorghum and early millet have resurfaced. This year, soybean producers have seen strong demand for their produce due to its high quality. At the national level, an association of promoters of agroecology has emerged.

Mrs. Catherine Ayaovi, an agricultural producer, gave the following testimony:

“The application of organic manure to my plot of land allowed me to get unexpected results. Before, it was almost impossible for me to sell my soybeans on the market, because not only was production insufficient but also of poor quality. The taste was not at all appreciated. Today the trend has been reversed. Not only is production enough to feed my family, but I sell the surplus more easily on the local market.”

Multiplier effects of the project

Having seen the results of the initiative (which is still on-going), at least 500 other producers have opted for natural soil fertilization systems to increase their production. Over 1000 hectares of soil were recovered through erosion control works. Initially, the crops in focus were sorghum, early millet, soybeans and rice. Given the results, the practice has spread to include other crops such as maize and vegetables.



Crop residues are fed to animals whose droppings are collected for use as manure. Uneaten residues are then used for amending the field e.g. as mulch.



The water pumping system of the two boreholes that supply the vegetable gardens in dry season is powered by solar energy

Opportunities and Challenges

Producers in the region are open to agroecological innovations. The good practices they learn are appropriate for the skills they possess, and implementation costs are low compared to the benefits they generate.

The resulting products are healthy and more attractive and thus more competitive in the marketplace, especially in this time when all eyes are on the highest quality products. However, the biggest challenge is to get all of the producers in the region to shift to agroecology.

CONCLUSION

We do not inherit nature from our ancestors; we borrow it from our children. So we have the urgent duty to take good care of it, so as to return it in good condition to future generations. Agroecology by its practicality, simplicity, productivity and quality of product, is the only approach that takes into account the preservation of the health of nature, including that of humankind.



The post harvest products are sun-dried and stored in sealed bags

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