

WORLD AGROFORESTRY IN PRACTICE

Establishing hedgerow boundaries to provide environmental protection and economic return for the Sahelian agriculture.

WÉGOUBRI: THE SAHELIAN BOCAGE

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LOCATION Africa, Burkina Faso

ORGANISATION Terre Verte

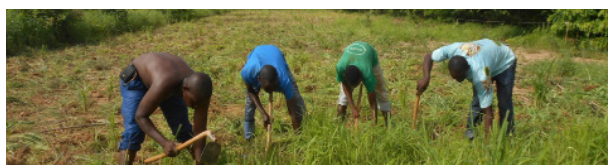
TYPE OF PRACTICES Sylvopastoralism

PRODUCTION Cattle, fodder, fruits, wood



1 GENERAL CONTEXT

In the Sudanian zone of Burkina Faso, a great effort is made to shape the landscape with hedgerows which provides a number of environmental services against the extremes of fire, wind, sun, rain (erosion/flooding), protecting crops and grazing animals. Diverse options for non-timber agroforestry products can be harvested such as fruit, nuts, medicines, fodder, firewood or barks to make rural crafts.



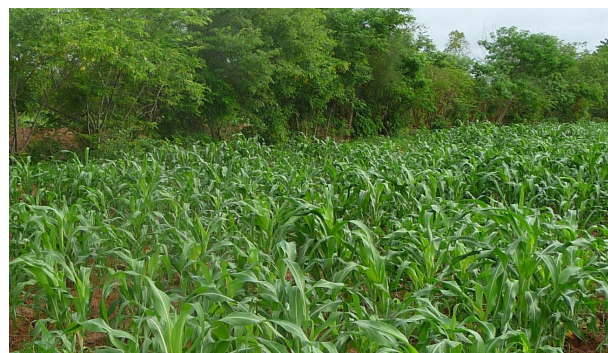
2 ENVIRONMENTAL CHARACTERISTICS

Sudan zone, annual rainfall is between 700 and 800 millimeters spread over 4 to 5 months, between May and October. Soil is composed of clayey-sand with laterite profiles, from which a dense savannah with trees and shrubs grew some decades ago, but now is quite bare.

3 DESCRIPTION AND INTEREST

The Sahelian area has been suffering from a high exploitation these last decades, putting a high pressure on its natural resources, especially its flora. It led to a weakening of the soil which is now very exposed and sensitive to erosion from wind and water. The extreme climate of this region gravely aggravates this soil issue.

The concept of bocage has a special importance in this context of crisis, it can provide many solutions to the soil and biodiversity problems while promoting both an individual and a collective initiative. Each family has several plots, between 3 and 6 depending on the configuration of the bocage, that it will manage individually (which crops, rotations, etc.). However, the “firewall” (the hedges) and the sentries are maintained collectively. Thanks to little earth-dykes built on the contour of the areas and the tree and shrub hedges, erosion has been quasi eliminated in the bocage zones.





4 TREE SPECIES

Various tree species are found in the hedgerow zones: external hedges are planted with local species like *Cassia sieberiana* that can be pruned frequently (every 5 to 7 years) for firewood production. Internal hedges are planted with shrubs with many uses (fruits, various wood fuels). Inside the plots are planted lines of high trees to provide shade, high value timber and inputs (some species are leguminous, providing nitrogen fixation for the soil, such as *Faidherbia albida*).

5 STAKEHOLDERS AND CHALLENGES

The Sahelian bocage initiative relies on the will of the locals to initiate a change into their agricultural practices. It is a strongly rooted concept that is developed into the community. Pilot farms are disseminated in the region to help finding solutions to agricultural and socio-economic issues.



6 PRODUCTS AND USES

The hedgerows provide nutritional food for the people (self consumption and local markets), fodder for the animals, wood fuels and construction materials. The goods and services attained from the hedgerows give the farmers the option to diversify their incomes and nourish their soils.

7 LANDSCAPE MANAGEMENT

Agricultural practices can vary inside a crop rotation, including grazed fallows, while margins are maintained with beneficial hedgerow management. Most crops are harvested once a year, during the rainy season (May to October).

WORDS FROM THE FIELD

Pascaline OUEDRAOGO

(farmer from Guiè/Tankouri):

Tree hedges fertilize the soil and give us materials for our compost. We can achieve good yields this way and collect firewood for cooking.

Samuel OUEDRAOGO

(farmer from Guiè/Tankouri):

Dry leaves for the hedges give us compost and wood-fuel. Trees also attract rain and protect our crops from the wind during harvest period. Other trees give us fruits that we can eat. Their roots and bark are also very useful to cure injuries and diseases (stomachaches, malaria, etc.).



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