"PRACTICAL SCALE DEMONSTRATION PILOTS BASED ON AGROSILVIPASTORAL SYSTEMS", A CELOS INTENT

BACKGROUND

Sustainable cultivation systems should be designed for re-allocation of previously exploited and afterwards abandoned fields and pastures characterized by thoroughly weathered or unstable sandy soils of the Surinamese old coastal plain and savanna region.

OBJECTIVE

The design of appropriate, acceptable, beneficial and environment friendly integrated production systems for specific rural regions to enhance food security, food safety and to support the development of the local food and non-food processing sector.

MATERIAL AND METHODS

Assess the natural and infrastructural environment for identified rural sites with sandy soils in the coastal plains and savanna region.

Identify stakeholders: crop and livestock farmers, potential processors or investors and partner organizations for participatory research.

Attain consensus regarding the elements to be included in the production system (annual and perennial leafy or woody crop species or varieties and kind of livestock) based on questionnaire results (farmers and processors) and innovative insights.

Identify the scale for the production volumes and system (economy of scale vs. small scale)

Design the production system based on good agricultural practices and adapted to climate change consequences:

- Design a drainage and irrigation infrastructure and a sustainable field layout (contour tillage and planting to minimize erosion) adapted to the landscape
- Calculate the required production area per annual crop and per season

Compare initial environmental baseline study results with evaluation results after 2, 4 and 6 project years.

The evolution of the adoptability of the system by farmers and the satisfaction of the processors regarding the delivered raw material

The evolution of the financial benefits of the system for farmers and processors

EXPECTED RESULTS

Preliminary research results

Original ecosystem baseline study results for the chosen pilot fields: biodiversity; physical, chemical and biological soil fertility; landscape; climate; water quality and hydrology

Regional socio-economic baseline study results

Local questionnaire results

An acceptable theoretical infrastructural design for the pilot sites and fields

An appropriate multi annual production system

Designed and implemented agrosilvipastoral system

Interdisciplinary and participatory data collection, description and analysis of the evolution of the technical baseline elements throughout the project; the cultivated annual and perennial crops (growth, yield, product quality); the elevated livestock (growth, meat, egg or milk production); the interrelationships and agronomic benefits within the system

Sustainability data

Comparison of initial environmental baseline study results with evaluation results after 2, 4 and 6 project years.

The evolution of the adoptability of the system by farmers and the satisfaction of the processors regarding the delivered raw material

The evolution of the financial benefits of the system for farmers and processors