

INTRODUCTION

Cameroon has been producing palm oil for centuries but industrial scale production started around 1907 under the German colonization around the Littoral region.

The production is stratified in three groups: an agro-industrial sector, smallholders in contract with agro-industries and traditional independent smallholders also called artisanal sector.

Smallholders with less than 5 ha of oil palm represent more than 75% of oil palm growers but provide only half of the production due to very low yields.

This paper analyses the operation of smallholding oil palm value chain in the Department of Sanaga-Maritime.

METHODS

Systemic approach, based on the farms typology was the method adopted in this study. Three main criteria were defined in classifying oil palm plantations: the geographical location of the farmers, the size of the farm and finally the cropping system employed.

Data were collected through field survey that involved distribution of pre-structured questionnaires to a sample of 60 actors purposively selected (that is 30 farmers and 30 artisanal millers). The data collected were analysed using Olympe software. The Olympe software was developed by INRA/IAMM/CIRAD to model and simulate how farming systems function.

RESULTS

Two main actors in the sector: Oil palm farmers and artisanal millers:

Smallholding oil palm plantations

Three types of village plantations were identified : family farms (type 1) with less than 5 ha; rural investors' farms (type 2) where the size varies between 5 to 10 ha and finally urban investors' farms (type 3) with areas ranging from 10 to 200 ha).

Figure 1 shows the evolution of the productivity of a hectare of land in a family farm (type 1). The vertical axis represents the annual productivity of the land in FCFA/ ha, the x-axis represents the number of years after the establishment of the farm.



Fig.1. Evolution of the productivity of the land in a family palm

The curve representing the land productivity of the oil palm in a family farms (type 1) is divided into three main stages:

- An installation stage during the first three years after planting. It is at this stage that some farmers intercrop oil palm trees with food crops (mainly maize, cocoyam and cassava) for both household consumption and commercial purposes);
- The rapid growth stage of the oil palm production. It is marked by a rapid increase in the performance of palm trees (beginning of the nuts production) from the fourth to the tenth year;
- The third stage is the period of full maturity, with a stabilization of productivity (from eleven to thirty years). In general, the operating life of a palm can go beyond 30 years.

Figure 2 compares the productivity of land in three types of smallholdings oil palm plantations.



Fig.2. Comparison of the productivity of the land of the three types of plantations

The highest margins/ha are observed in type 3 plantations (urban investors), followed by family farmers (type 1), and finally rural investors (type 2). Margins of family farmers (type 1) are higher than those of rural investors (type2) due to the integration of sales revenue of food crops during the first three years as well as the sale of palm oil.

Artisanal milling

The traditional of oil palm using artisanal presses is well developed by the majority of smallholders around the study area.

Two types of palm oil presses were identified in the study area: the manual press without a digester locally called *tournée tournée* and the motorized horizontal press.



Fig.4. Manual vertical press



Fig.5. Motorized horizontal press

The manual vertical press was the most frequent type of processing equipment in the study area. The motorized horizontal press system is more economical in terms of labour and generates more revenue than the manual vertical press (high production capacity of pressing palm nuts per day).

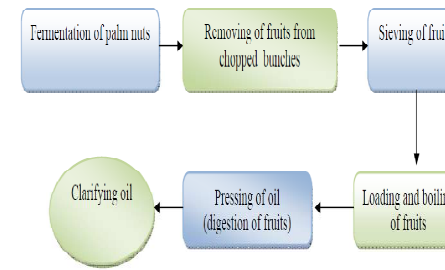


Fig.3. Schematic representation of milling activities

CONCLUSIONS

It is very important that Cameroon takes a strategic approach to overcome this production deficit by maximizing the economic benefits of the activity and minimizing the possible negative environmental impacts linked to the expansion of oil palm plantations.

The strategy for the proposed expansion of the sector could be developed by the following considerations:

Invest in increasing the productivity and yield of the existing oil palm plantations (improved planting materials, improved inputs, improved management of harvesting);

Ensure that all future palm oil expansion in Cameroon is developed in a sustainable way with minimum impact on carbon emission levels and biodiversity conservation, by focusing on degraded lands;

Avoid as much as possible the overall reduction of the permanent forest estate with an emphasis on development of areas already deforested or degraded.