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Review

Cocoa production in West Africa, a review and analysis of recent developments



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ABSTRACT

This paper reviews the present condition of cocoa growing in West Africa where some six million ha are planted with cocoa which provide about 70 percent of the total world production. Côte d'Ivoire and Ghana are the largest producers, followed by Nigeria and Cameroon. In the beginning of the 21st century the cocoa production increased from about 2,000,000 tons to about 3,000,000 tons in 2010 and subsequent years. While in this period expansion of the cocoa area (at the expense of forest land) contributed to increased production, nowadays more cocoa has to come from higher yield per ha which is very low at present. This paper highlights at first cocoa growing in each of the cocoa producing countries and then deals with the common constraints and options to higher yields, especially those in Côte d'Ivoire and Ghana. The major causes of low yield are a high incidence of pests and diseases, the old age of cocoa farms and lack of soil nutrients.

Concerns about declining output due to aging and diseased trees have urged the government of Côte d'Ivoire and Ghana to launch large rehabilitation and replanting schemes which provide farmers with improved planting materials, plant protection chemicals and fertilizers. As owners of small farms do not earn enough income from their cocoa to purchase external inputs, the traditional mixed planting of cocoa and forest and fruit trees and some oil palms is discussed as an alternative to a high input approach. This low input low output system is sustainable but not the way forward to higher yields.

It is thought that in the short run higher cocoa prices and improved management including pest and disease control and to a certain extent fertilizer use offer scope for a larger cocoa output. In the more distant future the predicted climatic change and increased land use for food production will reduce the size of the cocoa area and affect the leading position of West Africa on the world cocoa market. This review shows that at present the conditions for sustainable production are not met and concludes that important structural changes in the cocoa sector are needed to reach this goal. These changes concern the economic viability of cocoa on small farms, extensive land use and the ecological impact of the current cocoa growing practice. The implementation of these changes requires area specific programs with as their common goal increased economic and environmentally sustainable cocoa production on less land.

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Contents

1. Introduction	2
2. Production in the main cocoa growing countries of West Africa	2
2.1. Côte d'Ivoire	2
2.2. Ghana	2
2.3. Nigeria	3
2.4. Cameroon	3
2.5. Common causes of low yield	3

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3.	The impact of major pests and diseases	3
3.1.	Cocoa Swollen Shoot Virus Disease	3
3.2.	Phytophthora Pod Rot	3
3.3.	Mirids	4
4.	Rehabilitation and replanting of cocoa fields	4
4.1.	Rehabilitation of mature cocoa fields	4
4.2.	Partial or complete replanting of old cocoa fields	4
4.3.	The use of improved planting material	4
4.4.	The use of Upper Amazon hybrid cocoa without shade	5
5.	The role of fertilizers in increasing the yield of farmers' cocoa	5
6.	Cocoa agroforestry as an alternative to a high-input approach	5
7.	Prospects for future cocoa production	5
7.1.	Short-term demand and supply	5
7.2.	Problems of the cocoa sector in the long run	6
8.	Towards sustainable cocoa production: growing more cocoa on less land	6
8.1.	The economic viability of cocoa on small farms	6
8.2.	Extensive land use and low yields, the need for intensification of the cropping system	6
8.3.	Reduction of negative ecological effects of cocoa cultivation	6
8.4.	An integrated approach	6
	References	7

1. Introduction

In West Africa cocoa is mainly grown by small holders who traditionally planted their cocoa at random under thinned forest shade. It is a low input cultivation system which uses the forest soil fertility and the existing shade. This simple method explains that some six million ha of the West African forest zone are planted with cocoa, which provides about 70 percent of the total world production. At present Côte d'Ivoire and Ghana are the largest producers followed by Nigeria and Cameroon. The cocoa production increased from, about 2,000,000 tons in 2000 to about 3,000,000 tons in 2010 and subsequent years (Table 1). The average yields however remain low because many farms are old and extensive cultivation methods are used. Farmers wishing to increase their cocoa output established new farms elsewhere in the forest zone. This search for new land has led both in Ghana and Côte d'Ivoire to large-scale deforestation. As at present little land is available for the expansion of the cocoa area a further increase in production has to come from an increase in yield of the existing mature trees and the replanting of old unproductive cocoa farms. This paper reviews at first cocoa growing in the main cocoa producing countries and then deals with the major causes of low yields and options to higher productivity, especially those found in the two largest cocoa producing countries Côte d'Ivoire and Ghana. These causes are high incidence impact of pests and diseases, old age of cocoa farms and lack of soil nutrients. As the options to improvements imply the use of costly external inputs cocoa agroforestry is discussed as alternative to a high input approach. Finally the prospects of cocoa production in West Africa and the conditions for its future economic and environmental sustainability are discussed.

2. Production in the main cocoa growing countries of West Africa

This review starts with the largest cocoa producing country Côte d'Ivoire and ends with the smallest one Cameroon.

2.1. Côte d'Ivoire

In Côte d'Ivoire the annual production increased from 900,000 tons in 1995 to 1,500,000 tons in 2011. This increase is related to an expansion of the cocoa area which began in the 1970s when the cocoa production shifted from the southeast to the southwest. This development is the outcome of land scarcity in the traditional

production area, a government policy to stimulate cocoa growing as an export crop, the availability of large virgin forest areas and a large scale labour migration from the north [4].

The spectacular production increase in the 2013-2014 season, however, is mainly attributed to a 40 percent increase in the farm gate price which prompted farmers to invest more time and inputs in their plantations [5]. This rapid increase shows that there was a latent production capacity that could be mobilized quickly. According to FAOSTAT data [6] the harvested area was about 2.5 million ha in 2012. The yield has remained 500–600 kg per ha during the last 20 years. Average cocoa farm sizes of 3 and 4 ha are mentioned but no reliable statistics are available. Almost all Upper Amazon cocoa hybrids (see 4.3.) in the south-western part of the country are grown without shade. The major constraints facing the cocoa sector are apart from deforestation and land degradation, the widespread occurrence of pests and diseases, early ageing of unshaded trees, no access to credit and agricultural inputs, and lack of land ownership [4]. At present the negative impact of the no-shade and low input use is manifesting itself in high tree mortality and declining yields [7]. To improve this situation and to stop further deforestation the department of agriculture has launched the Programme Quantité-Qualité-Croissance « 2QC » 2014-2023, to improve and intensify the existing farmers coffee and cocoa production systems. This envisages that by 2023 a cocoa area of 800,000 ha (including 150,000 ha affected by swollen shoot disease) has been replanted with improved planting material and that about 1,000,000 ha of cocoa has been rehabilitated by proper management and input use [8]. In addition the Cocoa Fertilizer Initiative has started a programme in 2012 to deliver fertilizers to 200,000 farmers by 2020 [9].

2.2. Ghana

In Ghana the cocoa production has steadily risen from 300,000 tons in 1995 to 900,000 tons in 2014 (Table 1). According to Asante-Poku and Angelucci [10] the main factors that have contributed to the increase in Ghana's cocoa production are the support measures of the government-owned cocoa marketing board COCOBOD. These include increases in farm gate prices, introduction of free pest and disease control programmes, the introduction of packages of hybrid seeds, fertilizers, insecticides and fungicides, improved marketing facilities and the repair of roads in cocoa growing areas. An important factor is also the expansion of the cocoa growing area, especially in the Western Region. According to FAOSTAT [6] the

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