

RUFORUM Working Document Series (ISSN 1607-9345), 2019, No. 18 (1): 887 - 890.
Available from <http://repository.ruforum.org>

Research Application Summary

Profit analysis of maize certified seed production in Mali: Case study of the commune of Kolokani

Bocoum, M.,^{1,2} Karambé, B.,² Bolozogola, Y.,¹ Traoré, A.B.M.³ & Dagnoko, S.^{1,2,3}

¹Rural Polytechnic Institute of Training and Applied Research, Koulikoro, Mali

²Seneso Ltd, Agricultural Research and Development Society, Bamako, Mali

³Sasakawa Africa Association, Bamako, Mali

Corresponding author: sokona.dagnoko@gmail.com

Abstract

Maize is a strategic crop for most West African Economic and Monetary Union (WAEMU) countries. As a staple food for humans, it is also used for poultry feed, which has a very high demand. Maize is the second most important cereal crop, after rice in terms of production in Mali. Domestic production rose from 50,000 tons in 1980 to more than 2,275,000 tons in 2015, according to statistics from the National Directorate of Agriculture (DNA). The achievement of food and nutrition security and the fight against poverty, that are the main objectives that the Malian authorities through the agricultural development policy and the strategic framework for growth and poverty reduction, rely in part on the intensification of agricultural production. It is in fact to produce more per unit area to reduce the extension of cultivated areas and preserve natural resources for future generations. In this context, the large-scale use of quality seeds of improved varieties adapted to agro-ecological conditions and meeting the needs of producers is of high importance. In the context of the fight against poverty and the increase of the income of the population of the study area, the present study analyzed the financial profitability of maize certified seed production in the targeted area. It was conducted with a sample of 24 producers for the collection of primary data. Secondary data were collected through literature reviews. The overall results of our study allowed us to establish that 58% of our sample did not attend school and the sample population has an average age of 47 years. Men were the majority with 88% and 92% of the sample married. The results also showed that a certified seed producer earned an average of 236,775 FCFA / cycle (approximately US \$ 395) as net income (profit) with a yield of 1,543 kg / ha at a selling price of 500 FCFA in average with a break-even point of 1069 kg. But the producers were confronted with several problems which included, among others: the small quantity and the poor distribution of the rains; difficult access to markets due to road degradation; lack of customers for the purchase of the product; difficulty in having basic seeds, etc. For better profitability it is necessary to promote access to quality agricultural inputs on time; to put in place appropriate storage facilities for good conservation; and to facilitate market access and build the capacity of producers (producer training).

Keywords: Break-even point, Mali, certified seed, maize, production, West Africa

Résumé

Le maïs est une culture stratégique pour la plupart des pays de l'Union économique et monétaire ouest-africaine (UEMOA). Aliment de base pour les humains, il est également utilisé pour l'alimentation des volailles, dont la demande est très élevée. Le maïs est la deuxième culture céréalière, après le riz, en termes de production au Mali. La production nationale est passée de 50 000 tonnes en 1980 à plus de 2 275 000 tonnes en 2015, selon les statistiques de la Direction nationale de l'agriculture (DNA). L'atteinte de la sécurité alimentaire et nutritionnelle et la lutte contre la pauvreté, qui sont les principaux objectifs que se fixent les autorités maliennes à travers la politique de développement agricole et le cadre stratégique pour la croissance et la réduction de la pauvreté, reposent en partie sur l'intensification de la production agricole. Il s'agit en effet de produire plus par unité de surface pour réduire l'extension des surfaces cultivées et préserver les ressources naturelles pour les générations futures. Dans ce contexte, l'utilisation à grande échelle de semences de qualité, de variétés améliorées, adaptées aux conditions agro-écologiques et répondant aux besoins des producteurs, revêt une grande importance. Dans le cadre de la lutte contre la pauvreté et l'augmentation des revenus de la population de la zone d'étude, la présente étude a analysé la rentabilité financière de la production de semences certifiées de maïs dans la zone ciblée. Elle a été menée auprès d'un échantillon de 24 producteurs pour la collecte des données primaires. Les données secondaires ont été collectées à travers des revues de la littérature. Les résultats globaux de notre étude nous ont permis d'établir que 58% de notre échantillon n'a pas été scolarisé et la population de l'échantillon a un âge moyen de 47 ans. Les hommes sont majoritaires (88%) et 92% de l'échantillon est marié. Les résultats ont également montré qu'un producteur de semences certifiées gagnait en moyenne 236.775 FCFA/cycle (environ 395 US \$) comme revenu net (bénéfice) avec un rendement de 1.543 kg / ha à un prix de vente de 500 FCFA en moyenne avec un seuil de rentabilité de 1069 kg. Mais les producteurs ont été confrontés à plusieurs problèmes dont, entre autres : la faible quantité et la mauvaise répartition des pluies ; l'accès difficile aux marchés à cause de la dégradation des routes ; le manque de clients pour l'achat du produit ; la difficulté de disposer des semences de base, etc. Pour une meilleure rentabilité, il est nécessaire de favoriser l'accès aux intrants agricoles de qualité et à temps ; de mettre en place des moyens de stockage appropriés pour une bonne conservation ; de faciliter l'accès au marché et de renforcer les capacités des producteurs (formation des producteurs).

Mots clés : Afrique de l'Ouest, seuil de rentabilité, Mali, semences certifiées, maïs, production.

Introduction

Maize is a strategic crop for most West African countries. In addition, it is a key subsistence crop, because of its many uses including human, animal, cosmetic and industrial consumption. Indeed maize is a major economic commodity in the rural world and a vector for reducing poverty for rural communities leading to increased demand for maize on the market. It is the second most important cereal crop, after rice in terms of production in Mali. Country production rose from 50,000 tons in 1980 to more than 2,275,000 tons in 2015, according to statistics from the National Directorate of Agriculture (DNA, 2015).

The objectives of achieving food and nutrition security and to fight poverty, set by the Malian authorities, through the Agricultural Development Policy and the Strategic Framework for Growth and Poverty Reduction, rely, in part, on the intensification of agricultural production. This is about producing more per unit area to reduce the extension of cultivated areas and preserve natural resources for future generations. In this context, the large-scale use of quality seeds of improved varieties adapted to agro-ecological conditions and meeting the needs of farmers is of high importance (CORAF/WECARD, 2018).

In the context of the fight against poverty and the need to increase income of the population in the study area, this study analyzed the financial profitability of maize certified seed production for farmers in the Kolokani commune in Mali. The overall objective was to contribute to the analysis of maize certified seed production and marketing in Kolokani Commune. The specific objectives of the study were to identify socio-economic characteristics of maize certified seed producing farmers; determine the production and profitability of maize certified seed in the study area; determine the break-even point of maize certified seed production and marketing; and identify the constraints related to production and marketing of certified seeds and propose possible solutions to overcome the constraints.

Study description

The study was conducted with a sample of 24 farmers for the collection of primary data. Secondary data were collected through literature reviews. The sample size was limited due to financial limitation. Data analysis was done using the Excel software. We analyzed the components of the cost of production to determine the financial profitability and break-even point of maize certified seed production in the study area.

Study findings

The results showed that 57% of the sample farmers did not attend school, which among other reasons contributed to their lack of awareness of the technical aspects and benefit of seed production. The sampled farmers had an average age of 47 years showing that the farmers were mostly adults. Further, men were the majority (88%), which means that men are more involved than women in the production of maize certified seed in the study area. The results further indicated that 92% of the sample were married, which suggests availability of family labor to carry-out most of the farm work.

The results also showed that a maize certified seed producing farmer earned an average of 236775 FCFA / season (approximately US\$395) per hectare net income (profit) with a yield of 1,543 kg / ha and an average selling price of 500 FCFA . The breakeven point was 1,069 kg / ha, which was not achieved by most of the farmers surveyed due to several factors including cultivation of small agricultural areas; In addition, farmers faced a number of problems that included, the low and poorly distributed rains; difficult access to markets due to poor roads; lack of incentives to farmers to purchase and plant certified seed; difficulty in accessing basic seeds; soil depletion; the high cost of agricultural inputs; and insufficient access to agricultural machinery.

Application of research findings

The findings of this study are of interest to maize value-chain actors from policy makers, to plant breeders to farmers and seed entrepreneurs. For better improvement in production, productivity,

and profitability of maize certified seed in the study area, we recommends to: facilitate farmer timely access to agricultural inputs; help to set up appropriate storage facilities for good conservation; capacity building of farmers (farmers training) on maize seed production and seed business; promoting production and distribution of foundation seeds; promoting the updating and dissemination of good agricultural practices of maize seed production that can increase production per unit area, thereby improving the level of performance and competitiveness; and putting in place strategies for the marketing of seed products.

Acknowledgment

This study was funded by Seneso Ltd, an Agricultural Research and Development Organization. It was part of the field research of the first author to fulfil the requirements for the diploma of “License in Agricultural Economics” of the Rural Polytechnical Institute of Training and Applied Research (IPR/IFRA), Mali. This paper is a contribution to the 2019 Fifteenth RUFORUM Annual General Meeting held 2-6 December 2019 in Cape Coast Ghana.

Reference

DNA. 2015. Rapport de Campagne, Direction Nationale nationale de l’Agriculture, Bamako, Mali; (CORAF/WECARD), 2018, impact de l’adoption des variétés améliorées de maïs sur le bien-être des maïsiculteurs au Bénin, au Burkina-Faso, en Côte d’Ivoire et au Mali, rapport régional, 46pp.