

Employment of agricultural graduates: Who are we training for?

Sidi Sanyang, Samba Ly¹, Stella Ennis², Lamin Jobe³, Lassine Diarra⁴, Pierre Bantaba⁵

Corresponding Author:

Dr Sidi Sanyang
CORAF/WECARD
B.P. 48
7 Avenue Bourguiba
Dakar
Senegal
E-mail: sidi561@yahoo.com

Abstract

Despite the active involvement of the civil society organizations such as agribusiness and farmers' organizations in the agriculture job market in the last 10 years, the public sector remain the major employer of agricultural graduates. This paper traces the employment of agricultural graduates over the last decade in Mali, Republic of Congo, Ghana and Gambia, as well as competencies and skills offered by agricultural training institutions. The public sector employed 94% of agricultural graduates in Mali, 84% in Gambia, and 55% in Ghana. The second largest employer was the NGOs, accounting for 4% in Mali, 7% in Gambia and 14% in Ghana. The agribusiness sector employed 1.2% in Mali, 7% in Gambia, and 12% in Ghana. It was only in Ghana that farmer organizations were reported to employ 4% of agricultural graduates. In Mali, Ghana and Gambia, employers reported 4% - 14% of the agricultural graduates they hired were women. Some of the key competence required by these employers includes agricultural engineering and farm machinery; agricultural economics with emphasis on farm management; innovation systems and value chains; and communication including report writing and ICT skills. Further, farmers' organizations look for agricultural graduates with good interpersonal skills; exposure to participatory technology development and dissemination; and appreciation of socio-cultural contexts.

Keywords: *agricultural graduates, agricultural training institutions, employment opportunities, public sector, NGOs, private sector agribusiness, farmers' organizations*

¹ CORAF/WECARD, 7 Avenue Bourguiba, B.P. 48, Dakar, Senegal

² CSIR-CRI, P.O. Box 3785, Kumasi – Ashanti, Ghana

³ NARI, P.M.B. 526, Serekunda, Gambia

⁴ IER, B.P. 258, Bamako, Mali

⁵ DGRST, Place CCF, B.P. 2499, Brazzaville, Congo

1. Introduction

A number of factors have been associated with the disappointing performance of the agricultural sector in some African countries. These include lack of adequate investment in roads, markets, and energy; weak social capital including education and health infrastructure especially in rural areas; limited or inappropriate direct investments in agriculture; and an unfavorable policy environment. Recently however, the performance of the agricultural sector has started to show positive trends in a number of African countries (Wiggin & Slater, 2011).

While the World Bank argued that context specific knowledge systems are needed to boost the productivity of African agriculture (World Bank, 2007), Ngugi et al. (2002) emphasize the necessity and urgency of change in agricultural education and for the “new universities” to demonstrate willingness and capability to induce change. The number of higher education institutions and the students enrolled in them has grown rapidly throughout Africa since the early 1960s. Funding for higher education in Africa kept pace with the expanding institutional base during the 1960s and 1970s, but has fallen well behind the growth in student numbers since 1980 (Beintema et.al, 1998).

It is therefore not surprising that the impact of trained agriculturalists on the performance of African agriculture continues to be debated. Africa’s food and poverty challenges require a redirection of thinking about agriculture’s role in the development process, and the need for a reliable food supply as a precondition for national development (Eicher & Staatz, 1988,). Consequently questions such as: *is the agricultural training on offer adequate in terms of curricula and teaching methods; and does it equip the trainees with the requisite mindset and skills needed to help increase agricultural productivity by smallholder farmers* must be addressed.

This aspect was addressed as a component of the Forum for Agricultural Research in Africa (FARA) led sub-Saharan Africa-wide project on *Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA)*. The major objective of SCARDA was to enhance institutional and human capacity of national agricultural research systems (NARS) and sub-regional organizations (ASARECA in Eastern Africa, CCARDESA in Southern Africa, and CORAF/WECARD in West and Central Africa). This paper reports on an assessment of the evolving employment opportunities for agricultural graduates in Mali, Republic of Congo, Ghana and Gambia, all in the CORAF/WECARD sub-region.

2. Methodology

A participatory consultation process involving CORAF/WECARD and the study consultants was held in Dakar, Senegal to identify a common methodology for assessing the employment opportunities for agricultural graduates in the four SCARDA target countries, namely Mali, Republic of Congo, Ghana and Gambia. Three approaches as suggested by Närman (1988) were identified namely; (i) the follow-up approach, (ii) the employer’s approach, and (iii) the retrospective approach.

The *follow-up approach* involves assessment of the training received by the students themselves. It is based on an evaluation of courses delivered prior to examinations, and the

same assessment is then conducted some time after graduation, especially with working graduates. The *employer's approach* is an attempt to understand the degree of employers' satisfaction with the work performance of graduate employees. The *retrospective approach* investigated the impact of the graduates' working experiences on the reform and or development of new training programs.

In each country the study focused on agricultural education and training institutions and employers of agricultural graduates in the public sector, agribusiness, farmers' organizations, NGOs active in agriculture, and to a limited extent, regional and international organizations. Open-ended interviews were used to gather information from training institutions while a structured questionnaire was used for the various levels of agricultural graduates and employers.

Training institutions including faculties and colleges of agriculture were interviewed in Mali, Republic of Congo, Ghana and Gambia (Table 1). The sample size for employers of agricultural graduates in the public sector and agribusiness (including farmer organizations) was 5-10 per country. About 150 – 170 employed and only 20 – 30 unemployed agricultural graduates were interviewed in each country. An attempt was made to interview both men and women employees. The interviews sought information covering the previous 10 years and included training and employment opportunities relating to crops and livestock production, fisheries, food processing, agricultural inputs, environment and forestry.

Table 1: Agricultural training institutions interviewed

Mali	Republic of Congo	Ghana	Gambia
Centre d'Apprentissage Agricole (CAA) de Samanko	Lycée technique agricole Amilcar Cabral (LAAC)	University of Ghana, Legon, Accra	Gambia College
Centre d'Apprentissage Agricole (CAA) de Samé	Institut Sylvo Agro Pastoral – Centre d'Education Professionnelle Agricole (ISAP-CEPA)	Kwame Nkrumah University of Science and Technology (KNUST), Kumasi	University of The Gambia
Centre de Formation Pratique en Elevage (CFPE) de Sotuba	Lycée Technique Agricole d'Ouessou (LTAO)	Kwadaso Agric. College in Ashanti Region	
Centre de Formation Pratique Forestier (CFPF) de Tabacoro	Institut de Développement Rural (IDR)	Animal Health and Production College in Pong Tamale	
Institut Polytechnique Rural de Formation et de Recherche Appliquée (IPR/IFRA) de Katibougou			
Faculté des Sciences et			

Techniques (FAST), Université de Bamako			
Université Mandé Bukari			

3. Findings

Over the 10 years of the study period, the public sector employed the majority of agricultural graduates: 94% in Mali, 84% in Gambia, and 55% in Ghana. The second largest employer was the NGOs, accounting for 4% in Mali, 7% in Gambia and 14% in Ghana. The agribusiness sector employed 1.2% in Mali, 7% in Gambia, and 12% in Ghana. It was only in Ghana that farmer organizations reported employing agricultural graduates, and these accounted for 4% of the total.

Data collection in Congo was incomplete and comparable statistics are not available. Nevertheless 984 agricultural graduate employees were reported in the public sector and only 16 within agribusinesses.

About 55% of employed students in Mali were employed in crops and agricultural engineering with another 20% in forestry. In Ghana, about 50% of the employed graduates were in economics and crops with graduates in animal science representing 17%.

This study targeted employers of various levels of agricultural graduates and could not systematically trace unemployed agricultural graduates in all countries. However, in Ghana the highest numbers of unemployed graduates were found in the areas of crops and livestock while agricultural engineering and forestry have the lowest numbers of unemployed.

Although the Republic of Congo reported 40% female agricultural graduates; Gambia on the other hand, indicated at most 5%. While Mali reported 13.7% female agricultural graduate in the public service, Ghana indicated about 5% female unemployment rate compared to their male unemployment rate of 11%. In Mali, Ghana and Gambia, employers reported 4% - 14% of the graduates they hired were women. In general, there were fewer female graduates employed in agriculture compared to their male counterparts and consequently, fewer females in this study sample.

The public service sector employers in all countries maintained that agricultural graduates were well trained in theoretically aspects and that teaching methods in general have remained largely academic. The graduates remain weak in applying their knowledge to solve practical problems in a dynamic and evolving system. They also reported that graduates lacked skills in preparing and managing projects, and administrative procedures including financial and human resource management as well as writing good reports. Despite all this, public sector employers continue to demand high academic qualifications and nationality. Ironically, public institutions are heavily involved in the development and revision of curricula and yet, they cannot proactively respond to the dynamic skills needs of employers of agricultural graduates.

It was observed that in all countries with the exception of Mali and the republic of Congo, students spent significantly more time in lectures than engaged in practical or hands-on

training. In Mali students spent one year of the three year program in the field. In general, training institutions reported they suffered from a lack of basic infrastructure including library, computer and laboratory facilities, and functional experimental or demonstration farms. They also reported lacking requisite human resources namely; well trained and experienced teaching staff and technicians. The shortage of qualified lecturers is partially explained by the generally unattractive salaries even though they may be higher than most public institutions. It was noted that very few changes have been introduced into the curricula since the creation of the training institutions. The subjects taught remain almost the same with the same contents and the same number of hours. In our view, the quality of students' supervision by teaching and support staff was not adequate.

Ghana reported a general growing disinterest in agricultural training through the decreasing number of students applying for admission. Evidence from the University of Ghana showed that the number of applicants dropped sharply from 1000 in 2003 to 370 in 2004. Similar trends were also observed for the University of Science and Technology in Kumasi. The disinterest in agricultural training can be partially explained by the declining job opportunities offered by the major public sector employer since 2003.

While public sector employers focused largely on the academic qualification of agricultural graduate employees, NGOs and agribusiness in all four countries preferred graduates with analytical and practical skills including value chains and innovation systems among others. Farmer organizations shared nearly the same views as agribusiness and NGOs but further emphasized interpersonal relationships, participatory technology development and dissemination, rural sociology, and appreciation of socio-cultural context and specificity of farmers. Both employers and graduates call for a review of agricultural curricular.

4. Discussion

While the public sector continues to be the main employer of agricultural graduates, civil society organizations, agribusiness and farmers' organizations are becoming more prominent in the employment market.

Because the curricula and teaching methods in general have remained academic, agricultural graduates were reported to lack basic managerial and financial skills. The training institutions continue to train for public sector employment—there is little emphasis for example on understanding agricultural value chains or practical skills. The agribusiness employers and NGOs preferred to hire people with prior work experience, positive personnel attitudes and values.

There was a general consensus among graduates that the practical training received was inadequate because of the large number of students admitted for degree programs relative to the available facilities. As a consequence, most graduates were more shaped in their thinking and orientation towards office work. The graduates in Gambia and to some extent in Mali further explained these weaknesses as inadequate research facilities and materials.

The introduction of new areas in agricultural curricula such as leadership and management; norms, values and practices; policy dialogue and formulation; learning processes and innovation, participatory curricular and teaching methods; as well as project design, financial and human resources management, and climate change among others, would help enhance the

competence and skills of future agricultural graduates and better prepare them for the evolving job market including self employment.

5. Conclusion

This assessment clearly demonstrates something of a mis-match between the agricultural education that is on offer and what potential employers are seeking. The establishment of formal and strong linkage with civil society employers, agribusiness and farmers' organizations through greater emphasis on innovation and entrepreneurship, will help make agricultural training more responsive to the changing job market. Such linkages should enable students' access to practical attachments and internships at various enterprises. To achieve this however, radical change is required in the mindsets of policy makers and those running agricultural training institutions.

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