

# Managing Seed Quality Control

Overcoming the governance challenges of seed certification in Ghana



## Executive Summary

*Good quality seed forms the basis for improving agricultural productivity and ensuring food security. Yet, seed certification schemes have often proved ineffective in ensuring the production of high quality seeds for farmers. It is the objective of this policy brief to highlight the major governance challenges associated with seed certification and quality control in Ghana's commercial seed sector. This policy brief further proposes specific recommendations that can be pursued by the Ministry of Food and Agriculture to help improve the management of seed quality control in Ghana.*

## Managing Seed Quality Control

This policy brief is targeted at officials of the Ministry of Food and Agriculture (MoFA) to help strengthen the management of commercial seed quality control in Ghana. It examines the major governance challenges associated with the process of seed certification in Ghana and its implications on the quality of certified seeds in the developing commercial seed sector. Seed is a vital unit of any crop-based production system. The quality of seed contributes greatly to crop yield, yield stability and eventual product quality. Thus, the basis for improving agricultural productivity and ensuring food security is to upgrade the quality of seed used in the production process regardless of the variety. Protecting farmers from poor quality commercial seed is therefore a critical issue for policymakers.

Seed certification schemes have widely been implemented as a measure to ensure high seed quality in

the commercial seed industry. Under Ghana's new seed law, the Plants and Fertilizer Act of 2010 (Act 803), all classes of seed in the commercial seed sector must be certified by the Ghana Seed Inspection Division (GSID) of the Plant Protection and Regulatory Services Directorate which falls under the Ministry of Food and Agriculture (MoFA). The law also leaves the door open for the possibility of privatized seed certification (GoG, 2010).

The case of maize seed certification is used for an empirical case study. Specific interventions by MoFA are proposed that have the potential of effectively addressing these challenges.

The empirical findings show that, despite the new policy directives, GSID does not have the capacity in terms of staff and logistics to ensure that certification regulations are consistently adhered to. Private sector seed certification modalities that may offer

some efficiency gains in quality assurance have yet to be explored. Therefore, there continue to be problems of poor quality certified seeds being produced and sold in Ghana's developing commercial seed sector. The findings reported in this policy brief form part of the broader research outcomes of the empirical study carried out by Poku et al. (2018).

## Empirical Case Study Approach

The study employed a participatory mapping technique based on in-depth interviews and visualization, known as Process Net-Map. This interview based mapping was used to gain detailed insights into the process of maize seed certification and quality control in Ghana's commercial seed sector as shown in Figure 1. The respondents were selected based on their extensive experience and understanding of how the entire maize seed certification and quality control process operates. Data was collected between July 2015 and January 2016.

## Governance Challenges in Seed Certification and Quality Control

The Ghana Seed Inspection Division (GSID) is tasked with field inspections, monitoring of conditioning sites and undertaking seed tests. Yet, GSID is greatly under-resourced. Interview information revealed that there are only 35 active seed inspectors nationwide.

Many of them double up as seed samplers and seed analysts, as well. The division is also sorely lacking logistics such as essential seed laboratory equipment, vehicles for the inspectors and even computers. **As a consequence of this limited capacity for seed regulation, GSID's regulatory oversight of source seed production (breeder and foundation seed) has been encumbered.** The case study finds that field inspectors face the challenge of being able to properly test all breeder seed before certifying them. Local private seed companies that obtain parental material directly from the two national agricultural research institutes for hybrid maize production reported to have experienced problems with breeder seed quality on several occasions.

### Foundation Seed

Quality assurance of foundation seed production by the Grains and Legumes Development Board (GLDB), a parastatal of MoFA, faces a similar challenge. At present, **GLDB still produces the bulk of foundation seed. Though domestic seed companies are now permitted to produce foundation seed for their own commercial seed production, none of them has been sanctioned yet by the GSID to produce foundation seed for sale to other seed companies and producers.** The information collected for this study as well as direct observation of facilities suggests that GLDB is overburdened with this role. The seed threshing, drying and cleaning equipment

**Figure 1: The process of seed certification and quality control in Ghana's commercial seed sector.**

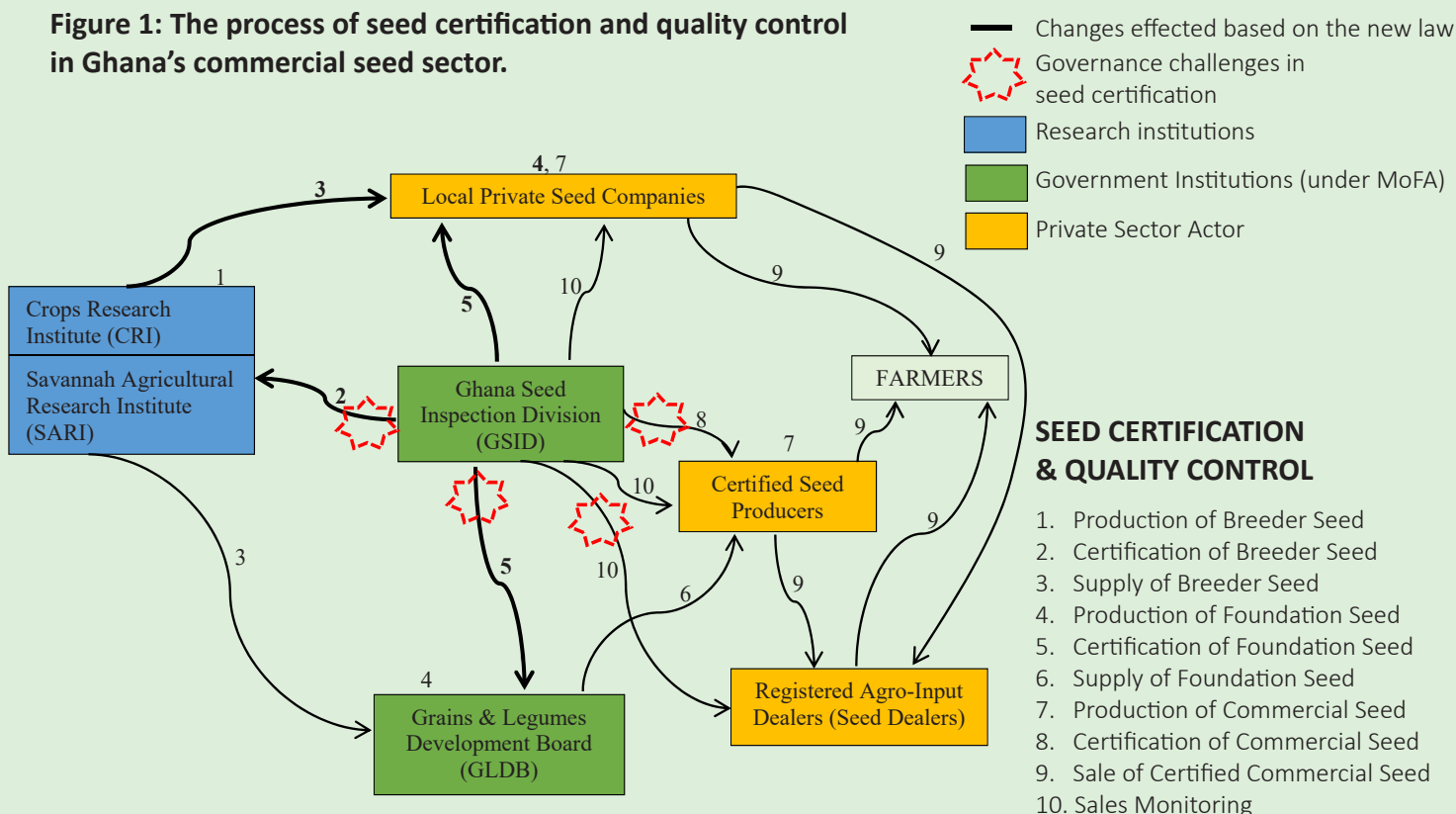






Figure 2 and 3: Seed drying machine purchased in the 1980s (left) and manual sorting of harvested commercial seed (right).

used by the Grains and Legumes Development Board (GLDB) is over 30 years old and frequently breaks down. This has resulted in less efficient and laborious activities such as manual seed cleaning and sun drying of seeds. **Consequently, seed producers have intermittently raised issues regarding the quality of foundation seed which can clearly be attributed to the antiquated seed conditioning equipment.**

#### Commercial Seed Production

The Ghana Seed Inspection Division (GSID) is most active at the commercial seed stage of the production chain. Field inspectors are required to visit all the production fields of seed producers and seed companies at least five times during the certification process. However, this goal is seldom achieved. **The small number of inspectors is simply unable to monitor all the dispersed seed production fields.** Thus, many seed producers operate with minimal supervision and quality assurance at the production stage.

#### Fraudulent Commercial Seed

After seeds are produced, field inspectors are also in charge of supervising the filling and sealing of seed bags by seed producers and local seed companies. **The standard packaging material issued by GSID has proved easy to imitate, a practice motivated by the fact that the price of certified commercial seed is higher than the price of maize grain.** Thus, it is common that merchants sell maize grain packaged as certified seed. Unregistered seed dealers appear to be the main source of fraudulent commercial seed. There have been a number of reported cases where farmers who purchased sub-standard maize seed have lodged complaints with the GSID. There is still no formalized procedure in place for addressing

such complaints. The new law provides more severe penalties for duplicitous activity in the commercial seed sector. However, the monitoring system of seed dealers is rather limited, as the GSID lacks the resources to implement effective regulation at sales points.

## Conclusion: Impediments to Effective Quality Assurance

The findings of the case study reveal that the extended regulatory oversight of the GSID under the new seed law has proved inadequate in ensuring high quality of certified seeds. The GSID is overburdened and under-resourced. Consequently, the GSID's limited regulatory resources are mainly dedicated to commercial seed inspection and certification. Less attention is paid to source seed quality assurance and retail inspections. In addressing these systemic governance challenges of seed certification and quality control, the GSID urgently requires increased financial, logistical and human resource support from the government through MoFA.

## References

- GoG. (2010). Plants and Fertilizer Act, 2010 (Act 803). Accra: Ministry of Food and Agriculture, Government of Ghana (GoG).
- Poku, A., Birner, R., and Gupta, S. (2018). Why do maize farmers in Ghana have a limited choice of improved seed varieties? An assessment of the governance challenges in seed supply. *Food Security Journal*, 10(1), 27-46.

## Recommendations

Based on the analysis of the governance challenges of seed certification in Ghana, we propose seven specific recommendations to officials of the Ministry of Food and Agriculture (MoFA) to help improve the management of seed quality control.

- The government, through MoFA, should increase its investment in the operations of the Ghana Seed Inspection Division (GSID) to enable effective seed quality regulation.
- Official fees based on the costs of mandatory seed certification should be charged by GSID to mobilize internally generated funds to help overcome the regulatory challenge of limited resources.
- Local private seed companies should be allowed to commercially produce foundation seed with the long term aim of fully privatizing this stage of seed production as the private sector grows.
- Local private seed companies should be accredited to assume some certification responsibilities such as being licensed to certify the commercial seed they produce.
- Rather than a standardized quality control system that invariably neglects certain crops, MoFA should consider parallel quality control systems for lower priority crops such as the FAO's Quality Declared Seed System which relies on randomized field and sales point inspections rather than general mandatory inspections; and authorizing the sale of "truthfully labeled seed" whereby seed producers are legally liable for stated seed quality.
- MoFA should ensure that the GSID establishes a task force, as backed by the Plants and Fertilizer Act of 2010 (Act 803), dedicated to periodic monitoring of all agro-input dealer shops to apprehend all unregistered merchants and culprits of fake and/or adulterated seeds being sold on the market.
- MoFA should ensure that the GSID links up to the public extension service to develop consumer education activities to effectively familiarize and update farmers with the various seed products available on the market as well as the registered seed companies and agro-input dealers selling them.

### **BiomassWeb – Improving food security in Africa through increased system productivity of biomass-based value webs**

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