The main objective of involving the private sector in the Ghanaian input supply system under the Economic Recovery Program in the late 1980’s was seen as an alternative to injecting efficiency in the supply chain. This as was envisaged, would lead to improved productivity and profitability of the crop sub-sector. Timely and efficient delivery of quality farm inputs such as fertilizers and pesticides at affordable and competitive prices. The liberalization however brought with it challenges of maintaining quality and problem of short weight of fertilizers.

At present, fertilizer regulation is governed under the Plants and Fertilizer Act, 2010 (ACT 803) which was enacted on the 4th of June, 2010 by Parliament. The Act 803 comprises of three (3) technical parts;
1. Plant Protection
2. Seeds
3. Fertilizer Control

For regulatory purposes, Part III of the Act 803 makes provisions for the following among others;
- Establishment of the Pesticide and Fertilizer Regulatory Division.
- Registration of importers, manufacturers and distributors.
- Fertilizer inspection and analysis.
- Development of fertilizer regulations
- Fertilizer register(database on fertilizer in Ghana)

Fertilizer regulations have been adopted by parliament and have now been published, likewise to the fertilizer Inspection and Fertilizer Analysis Manuals. With the assistance of COMPRO II Project, the registration guidelines for bio-fertilizers have been developed, approved, and are now being finalized for publication, distribution and implemented by PPRSD.

Current Progress
As mentioned above, the frameworks for the regulation of biofertilizers in Ghana are in place. This includes the policy, law, registration guidelines for biofertilizers, standard operating procedures and Plant Protection and Regulatory Service Directorate (PPRSD) to enforce these provisions. The registration guidelines lays down the processes involved in registering imported/locally manufactured biofertilizers, risk assessment, distributing and monitoring of those products.

Standard operating procedures (SOPS) for sampling, laboratory, greenhouse and field safety, quality and safety testing of biofertilizers have also been developed.
under the same support, and are now being validated by Kwame Nkrumah University of Science and Technology.

It is however important to realise that current policy on fertilizer does not adequately cover critical aspects of biofertilizers, and therefore the need to develop a policy that would adequately place special emphasis on biofertilizers.

**Current Challenges**

There is inadequacy of testing equipment for biofertilizers both at the reference lab and at PPRSD headquarters. Therefore there is need to seek financial resources to enable these labs obtain all the necessary equipment needed to carry out biofertilizer tests as recommended. Lack of proper equipment compromises the quality of results and subsequently the integrity of the entire system.

There is insufficient personnel at PPRSD with the requisite skills and expertise on biofertilizers. Thus, the need to build internal capacity, though training of current staff (by attaching them to experienced biofertilizer experts/researchers) and hiring new ones with the required skills.

There is need to increase financial allocations to PPRSD to enable it carry out efficient market surveillance and quality control for biofertilizers. These resources will be used in purchasing testing equipment, facilitating staff movement and carrying out lab/efficacy tests.

At the moment, the approved reference lab is only one. This lab is mostly overwhelmed with work thereby causing delays in obtaining results. This greatly impacts on the registration timelines. Furthermore, the distance between PPRSD and the reference lab (KNUST) is significantly prohibitive, thereby creating practical inconvenience in operations (transporting samples and making visits to the lab).

**Way Forward**

With the efforts by PPRSD to implement the registration guidelines for biofertilizers, it is important that the relevant arms of government should join hands in developing biofertilizer policy(ies). This should be advised by a baseline study of the current challenges and the existing measure experiences so as to come up with a comprehensive policy that promotes good practices. Interventions by COMPRO II to support harmonisation of these regulations and policies across its partner countries (Kenya, Uganda, Tanzania and Ethiopia) have also been felt.

It is important to create awareness/sensitization of stakeholders (farmers, industry players, researchers, policy makers and inspectors/enforcers) on these regulatory advances, particularly on the registration guidelines in order to obtain maximum cooperation and support in their implementation. In this regards, there is need for PPRSD to carry out a biofertilizer market survey to determine the number of biofertilizers in the market both registered and unregistered and the results of which can be used in the stakeholder sensitization, and also, appropriate legal action taken to ensure that only registered/approved products are in the market.

The processing of applications by PPRSD should be well managed to ensure that the competitive advantage between compliant and the noncompliant operators is to the minimum.

PPRSD in conjunction with Ghana bureau of standards to facilitate accreditation/ approval of laboratories for quality, safety and efficacy testing of biofertilisers should be enhanced to support provision of safe, efficacious products to the Ghanaian Market. As such, more research institutions and labs should be identified, audited, their capacity built and accredited appropriately to enable them provide efficient and reliable biofertilizer testing and validation. There is a need to work with the accredited/appointed labs in contractual terms to minimize delays and unnecessary delays in obtaining results.

PPRSD to create space (plots) for demonstrations and trialling of approved biofertilizers, and involve farmers in order to building their capacity towards responsible and sustainable use of biofertilizers. The involvement of farmers in demonstrations will increase their know-how on biofertilizers matters including their impact on the soils/environment (bio-remediation and sustainability)

There is need for PPRSD to increase the capacity for its staff to be able to effectively deal with biofertilizer enforcement in the market. This can be achieved through training and hiring of qualified biofertilizer analysts and agronomists.

The COMPRO II project is managed by the International Institute of Tropical Agriculture (IITA) and currently covers Ethiopia, Kenya, Tanzania, and Uganda in East Africa Ghana and Nigeria in West Africa). Objective 3 of the project aims to institutionalize and strengthen regulatory environments for commercial products including bio-fertilizers and bio-pesticides. This objective is led by African Agricultural Technology Foundation (AATF). The project is supported by Bill & Melinda Gates Foundation.