

Effective Regulation of bio-fertilizers and bio-pesticides: A potential avenue to increase agricultural productivity.

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Unlocking the Potential

Bio-fertilizers and bio pesticides hold the potential to increase farmers' current agricultural productivity, while at the same time contributing to the soil's ability to produce more in future. A number of countries such as Argentina, Canada, South Africa, India, Australia, the Philippines and United States of America and Brazil among others have embraced these technologies with promising results particularly for such proven technologies as use of rhizobium inoculants to increase production of legume crops¹, among other technologies. The list of potential commercial products that promise increased yield for the farmer continues to grow.

However for the smallholder farmers in sub-Saharan Africa, the potential benefits of bio-fertilizers and bio-pesticides remain largely untapped as a result of inadequate national policy and regulatory frameworks. Currently, smallholder farmers who venture into the use of commercial bio-fertilizers and bio-pesticides in the region are confronted by under-regulated influx of commercial products whose true benefits cannot be vouched for. Effective regulatory environments can significantly unlock the potential in bio-fertilizers use in sub-Saharan Africa.

A common picture across regulatory environments

The challenges for most countries in the region revolve around inadequate legislation, inadequate capacity and weak implementation of bio-fertilizers and bio-pesticides policies, where they exist. Although the situation is similar across countries, some countries can be described as having completed the process of developing regulatory systems, others as having interim or work in progress frameworks and yet others with no regulatory frameworks for bio-fertilizers and bio-pesticides respectively. Most countries in sub-Saharan Africa (SSA) fall in the category with unfinished or interim frameworks where regulatory frameworks remain mere drafts

What we should do

- Develop and/or review of existing fertilizer and pesticide policies to include bio - fertilizers and bio -pesticides
- Enact and or review laws on fertilizers and pesticides to include bio-fertilizers and bio-pesticides
- Review of existing regulations on fertilizers and pesticides to include bio-fertilizers and bio-pesticides
- Develop standards for bio-fertilizers and bio-pesticides. These should include standards Operating Procedures (SOPs) and norms on quality, safety, efficacy, testing, labeling and registration
- Establish institutions, facilities, and human resources to facilitate the production, testing
- Encourage regional integration efforts for harmonization of policies, laws, regulations and standards
- Disseminate information to stakeholder groups and ensure access to approved bio-fertilizers and bio-pesticide products

or are dissimilar thus impeding implementation efforts and therefore rendering poor facilitation of production, distribution and use of bio-fertilizers and bio-pesticides.

Others fall in the category of countries with fully developed regulatory frameworks but are affected by inadequate human, financial and material resources; weak institutional arrangements and overlapping mandates. The situation is not different when examined from a regional perspective with some regional blocks having fully developed their frameworks, while others either continue to work on theirs or have none in place.

In November 2012, representatives from six countries (Kenya, Uganda, Ethiopia, Tanzania, Nigeria and Ghana) which are part of the Commercial Products project (COMPRO II) undertook a regional stock taking of the regulatory environments and found that they are defined by a number of common characteristics covering policies, laws, regulations, standards, and institutional arrangements. From April, 2013 all six countries have moved further and undertaken country-level analysis that validates these common characteristics.

Key among the common characteristics includes:

- Inadequate or incomplete policies and guidelines for regulation of bio-fertilizers and bio-pesticides
- Multiple and often overlapping regulatory mandates by government agencies
- Limited capacity including staff, skills, and laboratory for product monitoring
- Inadequate enforcement of quality control for bio-fertilizers and bio-pesticides
- Lack of bio-fertilizer and bio-pesticide specific regulations, standards and guidelines
- Weak institutional arrangements with limited collaboration between relevant agencies

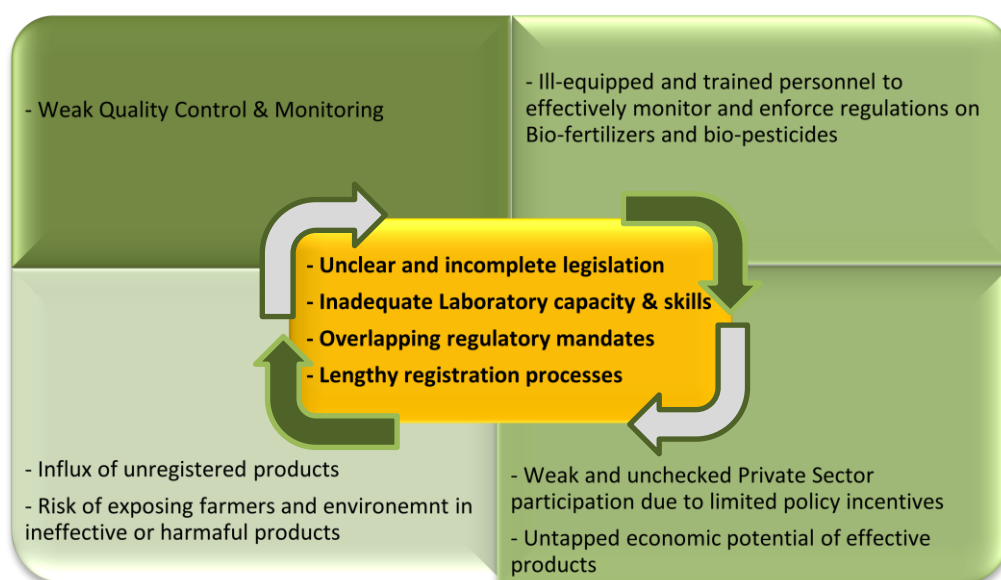
What is a Bio-fertilizer?

A bio-fertilizer is a substance which contains living microorganisms which, when applied to seed, plant surfaces, or soil, colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant.¹

Some common agents in bio fertilizers include Rhizobium, Azotobacter, Azospirillum, Phosphorus solubilising bacteria (PSB), Mycorrhizae.

The benefits of bio-fertilizers have been cited as; cost-effectiveness, provides up to 25-30% of chemical fertilizer equivalent of Nitrogen, provides Phosphorous and Potassium and increases water absorption, keeping soil biologically active

It is a cycle of implications for regulation of bio-fertilizers and bio-pesticides



The way forward for effective regulation of bio-fertilizers and bio-pesticides

Agriculture remains among the top cornerstones for the development of SSA especially now with huge increases in population coupled with reduction in food production over the past years. Fertilizer use per capita remains low in most of the continent with the result that smallholder farmer's yields can hardly make substantial contribution towards achieving food security and increasing incomes. This situation has in the recent times provided opportunities for production of alternatives in the form of bio-fertilizers, bio-pesticides, and other chemical agro-inputs by several actors. Although the research, production, distribution and use of bio-fertilizers and bio-pesticides is still at the early stages in Africa, these products have an important role to play in crop improvement and sustainable agricultural management.

This means therefore that firstly, a proactive approach to provide an enabling policy framework for deployment of these inputs is essential. So far, the six countries involved in the COMPRO II project including, Ethiopia, Ghana, Kenya, Nigeria, Tanzania, and Uganda are currently focusing attention on the critical area of strengthening of regulatory environment for effective of bio-fertilizers and bio-pesticides. Based on a series of regional and national workshops, beginning in November 2012, the country teams have distilled action points to move their countries forward toward establishment of better and more effective regulatory frameworks for bio-fertilizers and bio-pesticides. Secondly, investments aimed at ensuring farmers' access to agricultural inputs including bio-fertilizers and other soil enhancers need to become an essential part of government's strategy to increase agricultural productivity, and therefore food security.

Goal for 2013

During the remaining part of 2013, each participating country will implement its action plan for the formulation of the policy on bio-fertilizers or inclusion of bio-fertilizers in the drafts of the fertilizer policies. To ensure that affected and interested stakeholders contribute to the whole process, it is planned to consider consultative workshops including, but not limited to, the applicable regulatory bodies, the policy makers, the scientific community, the product proponents, and the farmer associations/organizations. It is worth emphasising that the creation of an enabling environment is led by the national regulatory bodies, but facilitated by the COMPRO-II project.

COMPRO II 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. This brief distills key issues and lessons from regional national consultative workshops organized by AATF on regulatory environments for bio-fertilizers and other commercial products.