

Executive Summary

It is increasingly felt that although the use of the agrochemicals helped a lot in increasing agricultural productivity but they have caused adverse effects on soil health, water quality, produce quality and developed problems like insect resistance, genetic variation in plants, toxic residues food and feed. There is a rising demand and justifications for intervention of ecologically safe and sound, environmentally compatible techniques in crop production which will provide global food security and improved agricultural produces. To accomplish this goal, application of agriculturally beneficial microorganisms is a potential, viable alternative to traditional agricultural techniques based on fossil fuel supported options.

Constantly increasing demand of biopesticides and biofertilizers offers exciting career for science graduates with a special reference to agri-graduates and scholars. Entrepreneurships based on production of biopesticides and biofertilizers have potential to generate large employment and income. However, in spite of fascinating and vast opportunities in this sector, growth and development of the same is not encouraging.

In order to process the idea of new start up and entrepreneurship, information is very essential factor. Based on the available information one can formulate and execute his idea of entrepreneuring. Similarly the start-up plan for setting a biopesticides and biofertilizers based industry need basic information for troubleshooting various problems. However, information regarding requirement for establishing a biopesticides and biofertilizers industry are lacking. Basic information related to available technological options, cost of production, quality control, turnkey solution and IP protection are lacking. Further, no information is available on how many industries are currently engaged in producing these organic inputs and what kind of microbial technologies are developed and transferred by which research institutions. Such knowledge gaps are big hurdle in starting new project initiatives.

Based on existing knowledge gaps and scattered partial information on available technologies, their cost, inventor details and guidelines, the proposed project was conceptualized for providing all information on single portal.

A team of experts collected data from primary and secondary sources for the reference period 2018-2020 covering three hundred nineteen public, private and cooperative enterprises engaged in development of microbial technologies. Apart from this seventy five SAU's and ICAR institutes and four CSIR institutes involved in bioinoculant production have also been covered during the study. Secondary data was collected from Ministry of Agriculture and Farmers welfare, Central Insecticide Board and Registration Committee, National Centre for Organic farming, Department of Fertilizer, Ministry of Chemicals and Fertilizer, Government of India's web page and personal contact.

From the extensive survey conducted during 2019 to 2021 eighty commercialized bioinoculant technologies and forty three cost effective and efficient green technologies involving AIMS from ICAR, CSIR and SAU systems is identified and enrichment was prepared. Further details pertaining to three hundred nineteen public, private and cooperative enterprises, twenty seven start ups involved in commercial production units for biological inputs was formulated in a structured format to help guide the users to relevant useful information.

In the present project, we have compiled an informative user friendly compendium on biopesticides and biofertilizers commercialization available green technologies for public use on single platform.

This project is mainly focused on the gathering of the information and presents them at single platform. This project will strengthen the idea of 'Skill India' which conceptualizes on providing a collaboration platform to help empower the all stakeholders to freely connect with each other. The overall focus of this initiative is to help provide an engaging ecosystem to cater to skilling needs of citizens by publishing and sharing relevant information.

The outcome of this initiative likely to direct inclusive growth especially for the budding entrepreneurs. The portal attempts to disseminate reliable information and by providing an interface to enquire, explore, and access and engage with various affiliated and accredited institutions, infrastructure providers, understand skill options, opportunities, information on various providers, reliable and credible digital content. It will also help in achieving the goals of Digital India scheme which is a flagship programme run by Government of India with a vision to transform India into a digitally empowered society and knowledge economy and by providing universally accessible digital resources and services in Indian languages. Widening demand – supply gap of food crops, increasing demand of organic food and the government focus on conserving the environment is expected to drive the growth of biofertilizers and biopesticides industry in India, who will be the major beneficiary of this outcome.