

Bio-fertilizers are being viewed as the future of fertilizers, as they have the ability to solve the problems of salinity of the soil, chemical-run offs from the fields. They ensure the well being of the nutrients present in the soil, therefore making the soil more fertile with time. These are more in demand for organic farming. During the past two decades advances in biological sciences have generated a new set of tools that allows us to use our biological resources. One of the biological tools that is now being integrated into biotechnology is the development of commercial Mycorrhizal inoculants for the use in agricultural and forest plants. The impetus for commercialization comes largely from the scientific literature and reports showing that AM associations benefit the plant growth, development and vigor. Benefits derived by AM fungi inoculums include the increase in root surface area for water and nutrient uptake, increased growth rate and yield of the plants etc. AM fungi also contribute to soil stabilization, mechanical aggregation and soil fertility. AM fungi are inoculated into wastelands, degraded sites, polluted soils and mine soils so as to convert them into green pastures. Therefore, mycorrhizae can be used as biofertilizers in the fields so as to decrease the use of chemical fertilizers, pesticides and fungicides. AM fungi can be multiplied in the form of soil pot culture and root organ culture. The soil and the root pieces containing the mycorrhizal infection can be supplied to the farmers for implications in their fields. Another method for supplying the mycorrhiza is by mixing the soil inoculum with several carriers like vermiculite, sawdust and clay etc. These carriers can be directly applied to the field before sowing the seeds.

Other than AM fungi use of *Trichoderma* sp., which is an eco-friendly fertilizer and also acts as a biocontrol agent and is hyper parasitic against different pathogens in the field should be applied to the fields for the better growth and yield of the plants. It can be supplied to the farmers in form of powder so that at the time of sowing seeds it can be directly apply in the soils. *Aspergillus* and *Gliocladium* can also be used as mineral solubilizing agents.

Present study is indicative of use of other fungi than *Trichoderma*. Also they can be mixed with the seeds that farmers store so that seeds can be protected from the storage fungi and thus, they can be stored for a long period of time.

Natural products or eco-friendly pesticides are an excellent alternative to synthetic pesticides as a means to reduce negative impacts to human health and the environment. The concept of “**Green Pesticides**” refers to all types of nature-oriented and beneficial pest control materials that can contribute to reduce the pest population and increase food production. Pesticides based on essential oils obtained from plants or their constituents have demonstrated efficacy against some plant pathogenic fungi responsible for pre and post-harvest diseases. They may be applied as fumigants, granular formulations or as direct sprays.

In the present study extracts from the plants like *Balanites roxburghii*, *Cochlospermum religiosum* and *Limmonia acidissima* were found to be effective against the pathogenic fungi. Farmers may be encouraged to use these plants with the proper information. Cultivation of these plants should be ensured and the extracts should be used as foliar spray to achieve integrated control against the pathogenic fungi.

Developing protocol for mass production of PSB, mycorrhizal consortium for effective field application should be tried. New research advances may be linked to call centre services for farmers by KVK (Krishi Vigyan Kendra) a unit of ICAR in Central Gujarat region.

The use of biopesticide will reduce the diseases in cotton and prevent the farmers from harmful effect of pesticides