



Popular Kheti

Volume -3, Issue-2 (April-June), 2015

Available online at www.popularkheti.info

© 2015 popularkheti.info

ISSN: 2321-0001

Biological Plant Nutrient Management for Healthy Soil

D. G. Panpatte¹ and Y. K. Jhala²

¹Senior Research Fellow, ²Assistant Professor,

Department of Agricultural Microbiology & Biofertilizer Projects,

Anand Agricultural University, Anand-388 110

Email: dgpanpattepop@gmail.com, ykjhala@gmail.com

Year 2015 is declared as International Year of Soil (IYS) for raising awareness on importance of soil in sustaining life support system on earth so keeping our soil healthy and productive is of paramount importance. Presently, more than 870 million people lack access to adequate food and nutrition. In this crisis agricultural production is facing increasing challenges like water scarcity, climate change, raising the risk of production shortfalls. The Green Revolution achieved by improved inputs, including fertilizer, irrigation, and to a certain extent, pesticides has increased wide varieties of agricultural crop yield per hectare. Due to that modern agriculture is getting more and more dependent upon the supply of nutrients through chemical fertilizers. However, irresponsible and excessive use of chemical inputs disturbs the harmony existing among the soil, plant and microbial population as well as their cost cannot make economic and profitable agricultural products. Awaken from the facts scientist are looking for an alternative of chemical fertilizers to be employed in organic farming and succeeded in the efforts by discovery of biofertilizers. Biofertilizers on the other hand are cost-effective and renewable source of plant nutrients to supplement the parts of chemical fertilizers. Biofertilizers are prepared from live or latent cells of different microorganisms and applied to seed, soil or composting areas to augment the availability of nutrients and to improve fertility status of soil. Microorganisms play a vital role in accelerating the beneficial microbial processes in soil. Biofertilizers can be grouped as Nitrogen fixing, Phosphate Solubilizing, Phosphate Mobilizing, Potash mobilizing, Zinc mobilizing/solubilizing etc. Biofertilizers exhibits better survival on seeds and soil, very much easy to use by the farmer and having very high enzymatic activity since contamination is nil. The demand for biofertilizers is increasing since the last decade owing to its eco-friendly characteristics and a worldwide trend to reduce the reliance on chemically derived fertilizers. The global market for biofertilizers is expected to exceed a market worth of USD 10.2 billion by 2018. Biofertilizers are important foundation stone that needs intensive research to achieve food security for the growing population and restore soil fertility. Nature has provided myriad opportunities for research in these fields which needs to be explored