

EDITORIAL

Microorganisms for Improved Crop Production and Better Human Health in Nepal

In 2018, Nepal's 27.6% gross domestic product is contributed by agriculture. The agricultural practices in the country are traditional and productivity is not an optimum level as expected. Nepal imports agricultural products of about Rs. 80 billions from the other countries. Current agricultural practices in Nepal depend on chemical fertilizers and pesticides. These chemicals have deleterious effects on nutritional value of crops and farmers and to consumers. Further, these chemicals in agriculture have resulted adverse effect on ecology, environmental contamination, accumulation of these toxic compounds in soil. These have led a demand for technologies of improving both the quantity and quality of agricultural products. To meet the demand of the growing population, the productivity need to be increased significantly.

There are very limited industries in Nepal producing biopesticides, microbial biofertilizers that can be used for increased agricultural production. Biofertilizers, biopesticides, and biocontrol agents are the alternatives to chemical agents. Microorganisms applied to soil or plant improve the productivity. These microorganisms are natural and widely used to control pests and protect human health. Microbial inoculants such as bacteria, fungi, virus and algae which are environment-friendly and can be used in sustainable manner. Therefore, farmers should be made aware of these microbial technologies and academic sector should be involved to develop these agents. Government sector, academia and industry collaboration in public private partnership model could help to move these activities further.

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