

Enhancement of Nitrogen Fixing Bio Fertilizers Causing Environmental Pollution

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An Opinion

Bio fertilizers are a promising various to risky chemical fertilizers and are gaining importance for attaining property agriculture. Bio fertilizers play a key role in increasing crop yield and maintaining semi-permanent soil fertility, which is essential for meeting international food demand. Microbes will act with the crop plants and enhance their immunity, growth, and development. Nitrogen, element, potassium, zinc, and silicon oxide are the essential nutrients needed for the right growth of crops, however these nutrients are naturally present in insolubilized or advanced forms

Bio fertilizers, conjointly known as microbic inoculants, are organic merchandise containing specific microorganisms, that are derived from plant roots and root zones. they need been shown to improve the expansion and yield of the plant by 10–40% [1]. These bio inoculants colonize the rhizosphere and therefore the interior of the plant, promoting plant growth once applied to the seed, plant surface, or the soil. They not only improve soil fertility and crop productivity by adding nutrients to the soil, however conjointly defend the plant from pests and diseases. The presence of microorganism within the soil depends upon the physical and chemical properties of the soil, organic matter, and phosphorus contents, similarly as cultural activities. However, nutrient fixation and plant growth sweetening by microorganism square measure key parts for achieving property agriculture goals in the future. Microbes additionally facilitate numerous nutrient cycles within the system.

Nitrogen is that the most limiting biological process issue for plant growth. The atmosphere contains concerning eightieth of the chemical element in free state, however most of the plants cannot utilize atmospheric chemical element. A specialised cluster of microbes are needed to mend this chemical element and create it on the market to the plant [2].

Nutrients are soluble and in real time obtainable to plants, making an immediate and quick effect. The value is lower and a lot of competitive than organic, that makes it more popular farmers they are quite high in nutrient content; solely comparatively little amounts are needed for crop growth.

Overuse may end up in negative effects like natural process, pollution of water resources, destruction of microorganisms and helpful insects, crop susceptibleness to disease attack, natural process or alkalization of the soil, or reduction in soil fertility, all of that cause irreparable injury to the general system. Oversupply of gas results in softening of plant part leading to increased susceptibility to diseases and pests. They cut back the constitution of plant roots with mycorrhizae and inhibit symbiotic organic process by Rhizobia thanks to high gas fertilization. They enhance the decomposition of soil, that results in degradation of soil structure [3].

References

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