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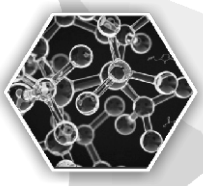
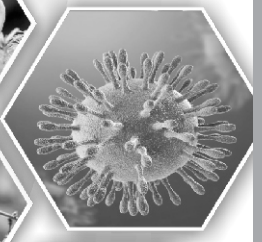


Abstracts & Souvenir



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ESTIMATING YIELD GAPS AMONG RICE (*ORYZA SATIVA*) GROWERS IN BUNDELKHAND REGION OF MADHYA PRADESH: CONSTRAINTS AND STRATEGIES TO NARROW THE GAP

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ABSTRACT

The study confined to Bundelkhand region of Madhya Pradesh for analysis of yield gap, constraints analysis and factors affecting the yield of rice. A higher yield gap in Tkamgarh (-91.67%) and a low yield gap in Damoh (-35.31%) district have been selected for rice crops. A list of all the cultivators growing the selected crop was further prepared and classified them into small (<2 ha), medium (2-5ha) and large (>5ha) categories and 10 farmers in each category were selected randomly for the study.. 30 farmers each from high and low yield gap districts, total 60 farmers were selected for rice crop. The yield gap II was found to be less in small (13.81%) as compared to medium (21.39%) and large (23.52%) farms. The yield gap-I, was found to be more as compared to yield gap-II in cultivation of rice, which denotes that recommended technology of rice still not reached to farmers field due to various constraints exist in the area under study. The yield gap was found due to various constraints faced by the respondents in cultivation of rice. Lack of suitable machinery for sowing, intercultural operations and harvesting (86.67%), un-availability of desired variety of HYVs seed (85%), high cost of input (71.67%), lack of proper knowledge of recommended packages of practices of SRI (60%), lack of knowledge about proper dose of fertilizer application (55%) and low germination of seed (50%) were found to be major constraints as reported by more than 50 per cent of respondents. Independents variable likes Use of HYV's Seed, Seed Treatment, Soil Test and Source of Seed were found to be positive and significantly related to yield of rice.

Key Words: Rice, YG, Bundelkhand, R^2Model and independent variables

IMPORTANCE OF BIOFERTILIZER AND ITS IMPORTANCE IN AGRICULTURE

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ABSTRACT

Bio-fertilizer is a substance which contains living microorganisms which, when applied to seed, plant surfaces, or soil, colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant (Vessey, 2003). Bio-fertilizers add nutrients through the natural processes of nitrogen fixation, solubilising phosphorus, and stimulating plant growth through the synthesis of growth promoting substances. Bio-fertilizers can be expected to reduce the use of chemical fertilizers and pesticides. The microorganisms in bio-fertilizers restore the soil's natural nutrient cycle and build soil organic matter. Bio-fertilizers are supposed tobe a safe alternative to chemical fertilizers to minimize the ecological disturbance. Bio-fertilizers are cost effective, eco-friendly and when they are required in bulk can be generated at the farm itself. They increase crop yield upto 10-40% and fix nitrogen upto 40-50 kg. The other plus point is that after using 3-4 years continuously there is no need of application of bio-fertilizers because parental inoculums are sufficient for growth and multiplication. They improve soil texture, pH, and other properties of soil. They produces plant growth promoting substances IAA amino acids, vitamins etc. They have 75% moisture and it could be applied to the field directly. Bio-fertilizers contained 3.5% - 4% nitrogen, 2% - 2.5% phosphorus and 1.5% potassium. In terms of N: P: K, it was found to be superior to farmyard manure and other type of manure (Mukhopadhyay, 2006).

Keywords: Biofertilizers, Rhizobium,Azotobacter,Acetobacter.