

Quality Control of Biofertilizer Production: -

Biofertilizers are the product containing living organisms which has the ability to convert nutritionally non usable form of nutrient into usable form or added to soil to supplement nutritional requirement of the plant.

In recent year use of biofertilizers has increased considerably. Hence a number of private producer and cooperative sector have come forward for production of biofertilizers. It is therefore need to check the quality of biofertilizers.

Quality is the most important parameter determining success or failure of biofertilizer and their acceptance or rejection by the farmers.

Quality of biofertilizers means right kind of MO in active form. It can be controlled at various stages of their production.

At present about 88 unit of biofertilizer production in India but most of them do not have their own quality testing laboratory. The outcome is that products reaching to farmers are often substandard giving poor response.

Quality testing and its control is very important prerequisite for the success of biofertilizer industries.

Quality Control of Biofertilizers :-

- Biofertilizers are the products contain living MO which has the ability to convert nonusable form of nutrient into usable form.
- In recent years use of Biofertilizers has been increased considerably.
- Therefore large no. of Private producers and co-operative Societies come forward for the production of bio fertilizers
- Hence it is necessary to control the quality of Biofertilizers (because success of any biofertilizer depends upon its quality)
- Basically quality means right kind of MO in active form.
- So can be controlled at various stages of the production.
- In India More than 88 production units are there.
- Stages requiring quality control
 - * During selection and identification of strain
 - * Carrier selection and standardization.
 - * Mixing of broth with carrier.
 - * Packaging
 - * Storage

In India BIS (ISI) has set up certain standards for Rhizobium and Azotobacter.

| Parameters | RI (Rhizobium) inoculants | Azotobacter inoculants (AI) |
|--------------------------------------|--|---|
| → Base | Carrier | Carrier |
| → Cell no at the time of manufacture | 10^8 / gm of carrier | 10^7 / gm of carrier |
| → Cell no at the time of expiry | 10^7 / gm carrier in 15 days before expiry | 10^6 / gm of carrier |
| → PH | 6.0 - 7.5 | 6.5 - 7.5 |
| → Strain | should be checked serologically | nothing & specific but <u>A. chroo</u> |
| → Carrier | Properly Meshed upto 150 - 212 μ . | 106 μ . |
| → Other | Inoculation test +ve in 50% or more. | Minimum amount of N_2 fixation not less than 10 mg/g of sucrose utilized. |

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18
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