

Research Paper :

Study of seed dressing effect with bio – agents and chemicals in chilli crop

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SUMMARY

The study reveled that the effect of bio-agent and chemical treatment increased shoot, root length as well as vigour index, also showing decreasing seedling mortality in chilli.

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Key words : Bio-agents, Seed dressing, Mortality, Vigour index, Germination

Chilli, a most common, popular and principal high value vegetable crop belonging to family Solanaceae. Both the green and dried ripe fruits of chilli are used as condiments in cooking and culinary preparation. In India, it is cultivated over an area 9.56 lakh ha with estimated production of 945500 MT dry production under Maharashtra. The crop is grown on 101100 ha land having average production of 577700 tonnes during 1998-99 (Negi, 2002).

Looking to variability of pathogens, there is little scope for developing resistant variety as well as a successful fungicidal control alone. Under this situation, the growers are let with alternative of using bio-agents for control of major diseases of chilli crop. Considering the beneficial effect of *Trichoderma* and *Pseudomonas* investigation was planned at Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola.

MATERIALS AND METHODS

A field experiment was conducted by using Jayanti variety seed of chilli along chemicals such as TMTD and Carbendazim, taken from the Department of Plant Pathology, Dr. Panjabrao Deshmukh Krishi Vidyapeeth,

Akola, The different species of *Trichoderma* and *Pseudomonas* required for treatments were obtained from Mahatma Phule Krishi Vidyapeeth, Rahuri. These bio-agents were mass multiplied on PDA broth medium in laboratory and later formulated with talc based powder @ 150 ml broth with ½ kg talc producer. A above formulated dose was treated with seeds of chilli @ 4 g/kg of seed for 15 hrs before sowing. A nursery trail was conducted at Central Research Farm., Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola under Randomised Block Design taking 3 replications and 10 treatments with a plot size of 2 x 1 m². Each bed has three rows in which 300 seeds were sown. The observations on emergence of chilli seedling were taken on 10-15 DAS. Later, the observations on root and shoot length, number of leaves were recorded for each treatment per replication on five seedlings basis on 35 DAS. The observations on seedling mortality were recorded on 20, 35 and 45 DAS.

RESULTS AND DISCUSSION

The beneficial effect of inoculation of bio-agents and chemicals on seedling emergence, growth parameters and seedling

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