



THE EFFECT OF MAGNETIC FIELD ON VIGNA RADIATA (PHASEOLUS) SEEDLING GROWTH

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ABSTRACT

Impact of magnetic field on vigna radiata was studied for period of 144 hours (6 Days). The percentage of seed germination and seedling establishment were studied. The result were compared the values of control with treated values. We observed a stimulated enhancement of seed germination and establishment. So, we can produce large amount of crop production in magnetic field..

I. INTRODUCTION

Earth itself is a large magnet, with its south pole situated at the geographic North Pole and the North Pole situated at the geographic South Pole. Its presence is extremely vital role for the existence of all living beings, since it serves a great protective purpose. In addition to the earth magnet, plants can be favorably well influenced by powerful magnetic field and grew faster. Murphy (1942) reported accelerated germination, improved hardness and advanced maturity of several plant species influenced by magnetic forces.

II. MATERIALS & METHODS

vignaradiata seeds were taken in Petri-culture experiment containing soil bed with 1:1 ratio of manure and soil was prepared for the experiment. Twenty five soaked seeds were sown in control (without magnetic field) and experimental Petri plates in magnetic field. These Petri plates were pre-marked and watered every day and kept at room temperature.

Germination of seeds were counted at 24 hours interval and seedling establishment was counted after 144 hours of exposure.

III. FORMATION OF MAGNETIC FIELD

Two bar magnets were kept on either side of the treated Petri plates in such a manner that the north pole of the magnet is towards the Petri plates on one side and South Pole of magnet is towards the Petri plates on other.

IV. RESULTS

Showing 98% of seed germination and seedling establishment in tested Petri culture at 144 hours of exposure period in magnetic field. Seed Germination and seedling establishment was more than 18% when compare to

control value (80%) which can depicts in table-1. In treated seeds, germination is faster than control value due to magnetic effect. Above findings agree with Boe salunke (1963) ; Montgomery and smith(1963) ; Pittman (1963); and Noriyuki Hirota (1999).

So, magnetic field influences the percentage of speed of seed germination in Phaseolus. Hence we can produce more crop yield.

Table-I: Showing seed germination percentage and seedling establishment in magnetic field at different hours of exposure in Petri culture.

	24 Hrs	48 Hrs	72 Hrs	96 Hrs	120 Hrs	144 Hrs	% of seedling establishment
Control	00	10	40	70	80	80	80
Treated	00	12	43	82	98	98	98

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