

Effect of cycocel on growth parameters of green gram (*Vigna radiata*) cv. BPMR – 145

S.S. KSHIRSAGAR*, B.N. CHAVAN¹, G. L. SAWARGAONKAR AND S. S. AMBHORE²

Department of Agronomy, Marathwada Agricultural University, PARBHANI (M.S) INDIA.

ABSTRACT

An experiment was conducted at Experimental Farm of Department of Agronomy, M.A.U. Parbhani during *kharif*. 2004-2005 in Randomized Block Design (R.B.D.) with three replications to study the effect of growth regulator i.e. cycocel @ 25, 50, 75, 100, 125, 150, 175ppm and one as control on vegetative growth of green gram. Among all the treatment application of cycocel @ 150 ppm was found beneficial in decreasing plant height, number of leaves and leaf area per plant. It was also observed that there was increase in number of nodules and number of lateral branches per plant.

Key words : Cycocel, Green gram, Vegetative growth.

INTRODUCTION

Green gram commonly known as mungbean or goldenbean is one of the most important short duration pulse crop grown in India. It is an excellent source of protein (25%) with high quality of lysine and tryptophan. It is fast growing short duration leguminous crop with dense foliage, acts as restorer of physiochemical properties of soil, it reduce the splash erosion as well as improves nitrogen content of soil.

Severe disease problem *i.e.* powdery mildew and mosaic causes low yield of green gram. The newly released genotype BPMR – 145 by M.A.U. Parbhani is high yielding and resistant to powdery mildew and mosaic but it display excessive vegetative growth. In view of this the trial was conducted to study the effect of cycocel on vegetative growth of green gram variety BPMR – 145 during *kharif* season.

MATERIALS AND METHODS

The field trial was conducted during *kharif* season of 2004-2005 at Experimental Farm of Department of Agronomy, M.A.U. Parbhani. The trial consisted of spraying of different concentrations *viz.*, 25, 50, 75, 100, 125, 150, 175 ppm cycocel spray and one as control at 35

after sowing. The sowing of the crop with the spacing of 30 x 10 cm was done in last week of June. The 25 kg N and 50 kg P₂O₅/ha were applied at the time of sowing. The treatments were randomly arranged in homogenous plot of gross size 5.40m x 3.60 m and net plot size is 4.50m x 2.40m. The experiment was conducted in randomized block design replicated three times. At maturity the crop is harvested manually by picking the dry pods from net plot as per the treatment separately. Periodic growth observations were recorded and analysed separately.

RESULTS AND DISCUSSION

The data on plant height number of leaves per plant, leaf area per plant, number of branches per plant and number of nodules per plant. At 60 days after sowing (DAS) are presented in Table 1. Application of cycocel @ 150 ppm was proved significantly effective in recording lower plant height (Table 1) over rest of the treatments as well as control but it was on par with cycocel concentration of 175 ppm. The decrease in plant height might be due to inhibition of cell elongation and reduction in the number of cells and size due to cycocel spray. Ravikumar and Kulkarni (1987) reported reduction in plant height of soybean due to spraying of cycocel @ 100 ppm. over. control Also similar results were observed by Nawalagatti and Panchal (1988) in *kharif* groundnut. kalaiya et.al (1991) in summer groundnut and kotole and salim (1990) in green gram.

Application of cycocel @ 150 ppm recorded significantly lower number of functional leaves (Table-1)

* Author for correspondence, Present Address :

* Department of Agronomy, College of Agricultural, Naigaon, NANDED (M.S.) INDIA

¹ National Agricultural Research Project, AURANGABAD (M.S.) INDIA

² N.P. Agricultural School, PACHOD (M.S.) INDIA