



Research Paper

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Yield and yield parameter of bell pepper under different spacings and fertilizers levels in shade net

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ABSTRACT : The bell pepper belongs to the family solanaceae and genus *Capsicum*. The bell pepper (*Capsicum annum* L. var. Grossum Sendt.; 2n = 24) is commonly known as sweet pepper, bell pepper, *Capsicum* or green pepper. Several agronomical factors like plant density and nutrient influence the yield of crop. Therefore, an experiment was conducted to find the effect of spacings and different levels of fertilizers on yield and yield parameters of bell pepper under shade net condition. The experiment was conducted at Horticulture garden, Regional Agricultural Research Station, Raichur during *Kharif*, 2008. The experiment was analyzed by split plot design with 3 main spacings and 6 sub plot fertilizer level plot with 3 replications. Compared to all fertilizer doses F₆ fertilizer dose (RDF+ FYM) dose recorded maximum fruit length, fruit girth and average fruit weight. Among spacing S₁ had recorded maximum fruit length, girth and average fruit weight. However because of more plant population (1, 11, 111) spacing S₃ had recorded the maximum yield per hectare in F₆ level (63.96 tons per hectare). This was supported by 6.40 kg per m² and 9.78 kg per plot in same spacing level S₃.

KEY WORDS : Bell pepper, Spacing and fertilizer, Shade net

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Bell pepper is one of the highly remunerative vegetables cultivated in most parts of the world especially in temperate regions of Central and South America and European countries. China is major capsicum producing country in the world. *Capsicum* [*Capsicum annum* (L.) Var. Grossum Sendt.] is native of tropical South America. It is also growing in tropical and subtropical regions of Asian continent. In the world, area and production of bell pepper is merged with that of hot pepper (chilli pepper). Hence, the exact statistics related to bell pepper or chilli as whole is given. Holland is the major exporter of bell peppers. Annual world production of capsicum in the year 2007 amounted to 27.46 million metric tons from an area of 1.72 million hectare (Anonymous, 2007). India's contribution was estimated to be 50,500 thousand metric tons from an area of 5,500 thousand hectares (FAO, 2004). *Capsicum* has a great potential for export. The present trend of expansion in vegetable in India for export and processing will result in a growth in capsicum production. But an improvement of cultural practices to boost production

for domestic consumption, processing and export is needed. Hence, the present study was proposed with the objective of finding the optimum spacing and fertilizer level for shade net condition.

RESEARCH METHODS

The effect of spacings and different levels of fertilizer dose experiment was conducted under shade net in bell pepper cv. INDRA. Experiment was conducted during *kharif*, 2008 at Horticulture garden, RARS, Raichur situated in North Eastern Dry Zone (Zone-2) of Karnataka at 16° 12' N latitude and 77° 20' E longitude with an altitude of 389 meters above the mean sea level. The experiment was laid out in split plot design with three spacings (S₁ - 45 x 45 cm), (S₂ - 45 x 30 cm) and (S₃ - 30 x 30 cm) in main plot treatments and different levels of fertilizers as sub plot treatments with three replications. (F₁ : FYM alone, F₂ : vermicompost alone (15 t/ha), F₃ : 50 per cent FYM + 50 per cent vermicompost, F₄ : 50 per cent FYM + 50 per cent RDF, F₅ : 50 per cent vermicompost + 50 per cent RDF and F₆ :