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IJPS INTERNATIONAL JOURNAL OF PLANT SCIENCES
Volume 8 | Issue 1 | January, 2013 | 127-130

RESEARCH ARTICLE

Effect of nitrogen sources and spacing on growth and yield of baby corn (*Zea mays* L.)

■ M. P. NEUPANE AND GAURAV MAHAJAN

SUMMARY

A field experiment was carried out at Agricultural Research Farm of Institute of Agricultural Sciences, BHU, Varanasi to study the response of nitrogen sources and spacing on growth and yield of baby corn during the pre- *Kharif* season of 2008 and 2009.The results clearly revealed that 75% N through urea + 25% N through FYM (N_2) and spacing of 40 cm × 15 cm (S_1) were found best source of nitrogen and spacing, respectively and their combination N_2S_1 (75% N through urea + 25% N through FYM + 40 cm × 15 cm spacing) emerged superior over all other treatment combinations in relation to growth, yield attribute and yield for commercial cultivation of baby corn under agro- climatic conditions of Varanasi.

Key Words : Baby corn, Nitrogen, Spacing, Yield attributes, Yield

How to cite this article : Neupane, M.P. and Mahajan, Gaurav (2013). Effect of nitrogen sources and spacing on growth and yield of baby corn (*Zea mays* L.). *Internat. J. Plant Sci.*, **8** (1) : 127-130.

Article chronicle : Received : 14.08.2012; **Revised :** 28.09.2012; **Accepted :** 18.11.2012

Baby corn, is a new economic product of maize (*Zea mays* L.) and little is known to the maize growers in India. The term "Baby corn" refers to young flowering maize cob harvested within 2-3 days of silk emergence. The lack of knowledge of use and economic importance of this product seems to be the major factors, besides lack of availability of production technology for popularizing its cultivation among cultivators. Maize is the principal rainy - season crop of Uttar Pradesh and keeping in view the maize production potential of the state and low economic returns from maize grain, its cultivation as baby corn can be exploited to improve the economic status of poor maize growers. Provided the suitable agro - techniques are made available. Maize is an exhaustive crop and requires heavy application of nitrogen along with phosphorus and potassium. The importance of nutrient supply (N, P and K) in maize is further aggravated when it is grown for baby corn production because of high plant density and extremely short duration of crop (Pandey *et al.,* 2000). Low response of crop to added fertilizers and declining factors productivity were noted under prevalent cropping system due to deterioration in physical, chemical and biological quality of soil (Harris and Bezdick, 1991) and much higher annual removal of nutrients by crops and cropping systems were noted than the amount added through fertilizers and resulted negative nutrient balance (Singh, 2006). The integrated nutrient supply including organic (FYM) and inorganic fertilizers improved the productivity of major cropping systems along with maintaining better soil quality on cost effective basis (Rao *et al.,* 2009). Crop geometry is one of the important factors which have to be maintained at optimum level to harvest maximum solar radiation and utilize the soil resources effectively. Hence, the present investigation was undertaken to find out the response of nitrogen sources and spacing on growth and yield of baby corn (*Zea mays* L.) under Varanasi condition of eastern Uttar Pradesh.

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MATERIALS AND METHODS

A field experiment was conducted during the pre - *Kharif* season of 2008 and 2009 at Agricultural Research farm,