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Research Note

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Varietal performance of round fruited F_1 hybrid of egg plant (*Solanum melongena* L.) in East Bihar

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ABSTRACT : The present experiment was under taken to assess the performance of 6 hybrids at permanent vegetable farm of Bihar Agricultural College, Sabour, Bhagalpur during rainy season 2007-08 and 2008-09. The experiment was laid out in a Randomized Block Design with four replication included 6 hybrids. The healthy seedlings were transplanted 60 x 60 cm spacing under plot size (3.6 x 3.0 m2). All the operations were carried out as per standard recommendations. The check Pusa hybrid – 6 was at the top with yield of 421.93 q/ha. Higher yield in Pusa hybrid – 6 was attributed due to cumulative effect of large fruit size, highest fruit weight, higher number of branches and more number of fruit per plant. From the above finding it is concluded that Pusa hybrid – 6 was the best for the east Bihar.

KEY WORDS : Varietal performance, F_1, Hybrid, Egg plant

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Egg plant (*Solanum melongena* L.) is one of the most important vegetables grown in almost all parts of the country except at higher altitude. It is very popular among the people of all social strata and hence, it is rightly called as vegetable of the masses. However, it productivity is very low because the grower uses old varieties/land races. Existence of immense variability in this crop, provides an opportunity to develop plants with good quality and higher productivity. The hybrids have good yield potential and quality produce. So the evaluation of large number of genotypes/ hybrids is a need for selecting desired variety. Keeping in view the above facts, the present investigation was under taken to assess relative performance of hybrids.

The investigation was carried out at permanent vegetable research farm of Bihar Agricultural College, Sabour, Bhagalpur during *Kharif* 2007 -08 and 2008 -09. The experiment was laid out in Randomized Block Design. Treatment comprised of 6 hybrids with 4 replications (Table 1). The healthy seedlings were transplanted at 60 x 60 cm spacing in plots size (3.6 x 3.0 m^2). Fertilizers were applied at the rate of 120 kg nitrogen, 75 kg P_2O_5 and 60 kg K_2O per hectare in the form of urea, SSP and MOP, respectively. 40% of N and full dose of P_2O_5 and K_2O were given as basal dose and remaining nitrogen was applied as two top dressing at 30 days intervals after 30 days of transplanting. All the operations were carried out as per standard recommendation, observation were recorded for growth and yield characters and data were analyzed in accordance with the method described by Panse and Sukhatme (1978).

A perusal of data (Table 1) revealed a significant difference in different hybrids with regard to plant height. The tallest plant (85.52 cm) was noted in KS – 224 and shortest (74.21 cm) in ARNH – 200. Pusa hybrid – 6 produced the highest number of branches/plant (7.40) which was at par with NDBH – 1 (6.97) and the lowest was HABH-08 (5.98).

The hybrids differed significantly in number of days taken to 50 per cent flowering. The earliest flowering (36.00 days) was recorded in Pusa hybrid – 6 which showed parity with HABH – 08 and NDBH – 1.While ARNH – 200 flowered very late (48.00 days). The maximum fruit set (61.38%) was also recorded in Pusa hybrid – 6 which was statistically at par with HABH – 08 (57.25%) and VNR – 200 (54.28%). The minimum fruit set (48.97%) was observed in KS – 224. The maximum number of fruit per plant (12.58) was noted in Pusa hybrid – 6 which showed statistical parity with NDBH – 1 and KS – 224, giving 11.78 and 11.36 fruits per plant, respectively while the