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Research Paper

Correlation and characters association studies in brinjal (*Solanum melongena* L.)

ADESH KUMAR, **SANJAY KUMAR AND** YOGESH CHANDRA YADAV

See end of the article for authors' affiliations

Correspondence to:
SANJAY KUMAR
Department of Applied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA

ABSTRACT

The present experiment was carried out entitled "Correlation Coefficient and correlation studies in Brinjal *(Solarium melongena* L.)" during *Kharif* season of the year 2008 2009 at Horticulture Research Farm, Department of Applied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University (A Central University), Vidya Vihar, Rae Bareli Road, Lucknow-226025 (U.P.) India. The experiment was laid out in Randomized Block Design with three replications. The experimental materials consisted fifteen genotypes of brinjal *i.e.* Aruna, DBL-24, DBR 8, Green Long, JB- 7, KS-224, KS-356, Punjab Sadabahar, PB-70, Ram Nagar Giant, Surya, VR-14, Pusa Purple Long, KS-331 and Pusa Purple Cluster). The highest and significant direct effects on total yield per plant was showed by weight of fruit followed by days to first fruit set and number of fruit per cluster, indicating that for bringing out desirable improvement towards total yield, diameter of fruit, days to first fruit set and number of primary branches per plant should be use direct selection programmes.

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Brinjal or egg plant (*Solarium melongena* L.) of the family solanaceae is one of the important aid popular vegetable crops grown in India and other parts of the world and originated in its wild form in Indo-Burma region and is probably a native of India and has been in cultivation since prehistoric times. Lucknow grows brinjal in winter as well as in rainy season to meet the market demands throughout the year which needs genetic advancement for higher yield and productivity in available germplasms of brinjal. Brinjal has been a staple vegetable in our diet and contains l.4g protein. 0.3g fat, 0.3g minerals, 1.3g fiber, 92.7g moisture per 100 g edible fruit and it is also a good source of calcium (18 mg), magnesium (16 mg) and phosphorus (47 mg). There are multifarious uses of brinjal. It is used as vegetable cooked, fried or roasted and in other culinary preparations. The brinjal fruit has cardiotonic, laxative and analgesic properties and enriches the blood. It is said to be good for diabetic patients.

It is a very nutritive vegetable having high percentage of carbohydrates, proteins and other essential nutrients and also has some medicinal properties. Various sizes, shapes, colours and forms of cultivated as well as wild type of brinjal are found in India, while type brinjal fruits is said to be good for diabetic patients. There are multifarious uses of brinjal.

MATERIALS AND METHODS

The present experiment was carried out during *Kharif* season of the year 2009-2010 at Horticulture Research farm. Department of Applied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University (A Central University), Vidya Vihar, Rae Bareli Road, Lucknow-226025 (U.P). India. The experiment was laid out in Randomized Block Design with three replications. The experimental materials consisted fifteen genotypes of brinjal *i.e.* Arum. DBL 24, DBR-8, Green Long, JB-7, KS-224, KS-356, Punjab Sadabahar, PB-70, Ram Nagar Giant, Surya, VR-14, Pusa Purple Long, KS-331 and Pusa Purple Cluster). At first field, ploughing was done with the help of disc harrow and two to four ploughing with the help of cultivator followed by planking. Field should be prepared thoroughly with the help of spade and Khurpi. In each treatments distance between row to row and plant to plant was 75 cm and 60 cm, respectively. The observations were recorded on twelve characters *viz.*, days to 50% flowering, number of flowers per cluster, number of long and medium styled flowers per cluster,