

## Short Communication:

**RESPONSE OF GAILLARDIA GENOTYPES TO YIELD AND QUALITY ATTRIBUTES**R. R. Girange<sup>1</sup>, S. S. Moon<sup>2</sup>, Nilima Gobade<sup>3</sup> and A. R. Jagdale<sup>4</sup>

Gaillardia is popularly known as blanket flower. It is native of America, especially in the West. Gaillardia flower have special importance during whole year especially for garland purposes. There is a constant demand for flowers throughout the year for various functions, festivals and floral decorations. As the commercial cultivation of gaillardia is gaining importance, introduction and identification of high yielding varieties is necessary. Hence, it is important to study morphological variation and performance of gaillardia genotypes in respect of yield and quality. Therefore, the present study was undertaken entitled "Response of different genotypes of gaillardia for yield and quality attributes".

An experiment entitled "Response of different genotypes of gaillardia for yield and quality attributes" was carried out at the farm of Horticulture Section, College of Agriculture, Nagpur during August, 2015 to February, 2016. Experiment was laid out in randomized block design with three replications and seven genotypes *viz.*, Double Mix, NG 01, NG 02, NG 03, NG 04, NG 05 and NG 06.

The experimental land was ploughed once, cross-wise harrowing was done for clod crushing and soil was brought into the fine tilth. At the time of land preparation, well rotten FYM @ 10 tonnes ha<sup>-1</sup> was mixed uniformly in the soil before last harrowing. The field was laid out with flat beds of the dimensions of 3.0 m X 3.6 m.

The raised beds of 7 m length and 1 m width and 15 cm height were prepared for raising the seedlings of Gaillardia. The seeds were sown on raised beds on 2<sup>nd</sup> September, 2015 in the line by keeping 8 cm distance within two lines. Immediately after seed sowing nursery beds were irrigated with the help of water can. Regular watering was given in the morning till the seedlings were ready for transplanting. Seedlings were allowed to grow in the nursery beds up to 30 days and then transplanting was done.

An application of FYM @ 10 tonnes ha<sup>-1</sup> was mixed at the time of last harrowing in the field prior to application of chemical fertilizers.

The recommended dose of fertilizer (100: 50: 50 kg NPK ha<sup>-1</sup>) was applied to all the plots in the form of urea, single super phosphate and muriate of potash. Out of this, full dose of phosphorus and potassium and 1/2 dose of nitrogen was applied at the time of transplanting. The remaining dose of nitrogen was applied in two split doses,

first dose was given at 30 days and second dose was given at 45 days after transplanting.

Observations were recorded on yield attributes *viz.*, number of flowers plant<sup>-1</sup>, yield plant<sup>-1</sup>, yield plot<sup>-1</sup>, yield ha<sup>-1</sup> and quality attributes *viz.*, diameter of flower, disc diameter, weight of flower and shelf life and collected data were statistically analyzed as per method suggested by Panse and Sukhatme (1978).

**Yield attributes**

The data in table 1 revealed that, significant differences were recorded in gaillardia genotypes in respect of yield attributes. The maximum number of flowers plant<sup>-1</sup> were produced by genotype NG-03 (51.19) which was at par with NG 06 (47.28). Whereas, minimum number of flowers were produced by genotype NG-02 (38.65).

Significantly maximum yield of flowers plant<sup>-1</sup> was recorded in genotype NG-03 (228.10 g) which was followed by NG-02 (184.67 g) and NG 04 (175.16 g). Whereas, minimum yield of flowers plot<sup>-1</sup> was produced by genotype Double Mix (2.12 kg). Significantly maximum yield of flowers hectare<sup>-1</sup> was recorded in genotype NG-03 (84.48 q) which was followed by genotypes NG-02 (68.40 q) and NG 04 (64.87 q). The minimum yield of flowers hectare<sup>-1</sup> was produced by genotype Double Mix (43.60 q).

The differentiating ability of yield of flowers hectare<sup>-1</sup> in various gaillardia genotypes could be attributed to their individual genetic potential. Similar results were also reported by Choudhary *et al.* (2014). They observed significantly maximum number of flowers plant<sup>-1</sup> and flower yield plant<sup>-1</sup> in marigold Hisar Jaffri as compared to other genotypes. Bharthi and Jawaharlal (2014) reported that marigold genotype Coimbatore Local Orange attained highest flower yield plant<sup>-1</sup>. Narsude *et al.* (2010) also noticed that, significantly maximum number of flowers plant<sup>-1</sup>, yield plant<sup>-1</sup> and yield hectare<sup>-1</sup> were recorded in marigold genotype Tuljapur Local-1. Atram *et al.* (2015) noted highest number of flowers plot<sup>-1</sup> and yield of flowers hectare<sup>-1</sup> in rose cv. Alliance.

**Quality Attributes**

The data in table 1 revealed that, significant differences were recorded in gaillardia genotypes in respect of quality attributes. Significantly maximum flower diameter was recorded in genotype NG-02 (7.72 cm) followed

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