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## Effect of soil and foliar application of organic nutrients on flowering and fruit-set of bittergourd cv. LONG GREEN

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**Abstract :** An investigation was carried out to find out the effect of soil and foliar application of organic nutrients on flowering and fruit set percentage of bittergourd (*Momordica charantia*) cv. LONG GREEN. Results of the experiment revealed that the application of FYM @ 25 t ha<sup>-1</sup> and vermicompost @ 5 t ha<sup>-1</sup> along with panchagavya 3 per cent foliar spray improved the number of female flowers and fruit set percentage of bittergourd cv. LONG GREEN. The same treatment was found to register early maturity of fruits in both season. Among the two seasons studied, the fruit set percentage was higher in season-II as compared to season-I, irrespective of the treatments.

**Key words :** Bittergourd, Flowering, Fruit set, Vermicompost, FYM

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**B**itter gourd or balsam pear (*Momordica charantia* L.) is one of the commercially important cucurbitaceous vegetable crops extensively grown throughout the country for its nutritive value and medicinal properties. The fruits are prepared for consumption in many ways and are quite commonly used as fried, boiled and stuffed forms. It is highly cross pollinated crop and it is a climbing vine.

Organic farming is a crop production system, which favours maximum use of organic matter, keeps the environment healthy and discourages synthetically generated agro-inputs used for maintaining soil fertility and productivity and controlling insect-pests under conditions of sustainable natural resources (Rana, 2004). The organic farming practices need to be standardized for many crops so also for bitter gourd. With this background, the present investigation was carried out to study the effect of organic nutrients on flowering and fruit set percentage of bitter gourd cv. long green.

### RESEARCH METHODS

An investigation was carried out in the vegetable field unit, Department of Horticulture, Faculty of Agriculture, Annamalai university, Annamalai nagar,

during two seasons viz., Season-I (January-April 2008) and season-II (July-October 2008) to study the effect of organic nutrients on flowering and fruit set of bitter gourd (*Momordica charantia*) cv. LONG GREEN under irrigated conditions. Bitter gourd cv. LONG GREEN, a popular local type collected from Panruti area near Cuddalore was used for the study. The fruits are dark green in colour, the fruit size is 25-30 cm long and the cultivar can be allowed to trail on the trellis. The crop duration is 120 days. The experiment was laid out in Randomized Block Design with 15 treatments and three replications. The treatments were T<sub>1</sub>: Absolute control, T<sub>2</sub>: FYM @ 25 t ha<sup>-1</sup>, T<sub>3</sub>: Vermicompost @ 5 t ha<sup>-1</sup>, T<sub>4</sub>: Neem cake @ 5 t ha<sup>-1</sup>, T<sub>5</sub>: FYM @ 25 t ha<sup>-1</sup> + Panchagavya @ 3 per cent, T<sub>6</sub>: Vermicompost @ 5t ha<sup>-1</sup> + Panchagavya @ 3 per cent, T<sub>7</sub>: Neem cake @ 5 t ha<sup>-1</sup> + Panchagavya @ 3 per cent, T<sub>8</sub>: FYM @ 25 t ha<sup>-1</sup> + Sea weed extract @ 3 per cent, T<sub>9</sub>: Vermicompost @ 5t ha<sup>-1</sup> + Sea weed extract @ 3 per cent, T<sub>10</sub>: Neem cake @ 5 t ha<sup>-1</sup> + Sea weed extract @ 3 per cent, T<sub>11</sub>: FYM @ 25 t ha<sup>-1</sup> + Vermicompost @ 5 t ha<sup>-1</sup> + Panchagavya @ 3 per cent, T<sub>12</sub>: FYM @ 25 t ha<sup>-1</sup> + Neem cake @ 5 t ha<sup>-1</sup> + Panchagavya @ 3 per cent, T<sub>13</sub>: FYM @ 25 t ha<sup>-1</sup> + Vermicompost @ 5 t ha<sup>-1</sup> + Sea weed extract @ 3 per cent, T<sub>14</sub>: FYM @ 25 t ha<sup>-1</sup> + Neem cake @ 5 t ha<sup>-1</sup> + Sea weed extract @ 3 per cent,