

## Effect of Band Application of Organic Manures on Growth and Yield of Pigeonpea (*Cajanus cajan* (L.) Millsp.)

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**Abstract :** A field experiment to study the effect of band application of organic manures on growth and yield of pigeon pea was conducted during 2016-17 at Kharif Seed Farm, College of Agriculture, Vijayapura. The experiment was carried out in randomized block design with thirteen treatments viz., T1 to T6 were band application of vermicompost at 0.5, 1.0, 1.5, 2.0, 2.5, 3.0 t ha<sup>-1</sup>, respectively. The treatments T7 to T12 include band application of sieved FYM at 1, 2, 3, 4, 5 and 6 t ha<sup>-1</sup>, respectively and were compared with already recommended practice of broadcasting of FYM at 6 t ha<sup>-1</sup> (T13); and recommended dose of fertilizer (25:50:0 NPK kg ha<sup>-1</sup>) was applied commonly to all the treatments. The results revealed that band application of vermicompost (VC) at 3 t ha<sup>-1</sup> recorded significantly higher number of pods plant<sup>-1</sup> (116), grain weight plant<sup>-1</sup> (37.35 g), grain yield (1,647 kg ha<sup>-1</sup>), stalk yield (2,920 kg ha<sup>-1</sup>) and harvest index (0.36) and was on par with the band application of VC at 2.0 and 2.5 t ha<sup>-1</sup> and sieved FYM at 4.0 and 5.0 t ha<sup>-1</sup> as compared to broadcasting of FYM at 6 t ha<sup>-1</sup> (99.33, 24.07 g, 1,061 kg ha<sup>-1</sup>, 2,920 kg ha<sup>-1</sup> and 0.36, respectively). Significantly higher net return (Rupees 59,410 ha<sup>-1</sup>) and benefit cost ratio of 2.92 recorded with band application of VC at 3 t ha<sup>-1</sup> over broadcasting of FYM at 6 tonnes per ha (Rupees 25,401 ha<sup>-1</sup> and 1.78, respectively). It indicates from the above results that, growing of pigeon pea with band application of VC at 2, 2.5 and 3 t ha<sup>-1</sup> and sieved FYM at 4 and 5 t ha<sup>-1</sup> leads to saving of 1 tonne of VC and 2 tonnes of FYM per ha.

**Keywords :** organic manures, rainfed pigeonpea, sieved FYM, vermicompost

**Conference Title :** ICBTOF 2018 : International Conference on Biofertilizer Technology and Organic Farming

**Conference Location :** Melbourne, Australia

**Conference Dates :** February 01-02, 2018