

## Research Article

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# Influence of on-farm liquid organic manures on soil health and crop production

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## Summary

A study on “Influence of on-farm liquid organic manures on soil health and crop production” was undertaken at the College of Agriculture, Vellayani during 2014-2017. The experiment was to evaluate the efficacy of soil and foliar applications of on-farm liquid organic manures on soil health and crop nutrition using Okra as a test crop. The treatments included were 75 per cent N as enriched vermicompost along with diluted liquid organic manures separately as soil and foliar applications. The post-harvest analysis of soil revealed that pH, EC, organic carbon and labile carbon contents varied significantly among the treatments. The highest organic carbon content of the soil was recorded by T<sub>4</sub> and T<sub>12</sub>. The maximum labile carbon was recorded by T<sub>8</sub>. T<sub>5</sub> was rich in available N. T<sub>5</sub> registered the highest plant uptake of major nutrients. The treatment T<sub>3</sub> registered the highest plant uptake of secondary nutrients. The highest value of Fe and Zn uptake was noticed in T<sub>11</sub>. The highest value of Cu uptake was noticed in T<sub>1</sub>. The highest value of Mn uptake was noticed in T<sub>3</sub>. The lowest plant uptake of all nutrients was recorded by T<sub>13</sub> (Absolute control). Economics of cultivation of okra indicated that the cost-benefit ratio was found higher for treatment T<sub>5</sub>, 75 per cent N as EVC + *Panchagavya* 3 per cent foliar application (2.83) followed by T<sub>7</sub>, 75 per cent N as EVC + cow urine 10 per cent foliar spray (2.09).

**Key words :** Okra, Benefit-cost ratio, Enriched vermicompost, Liquid organic manures, Growth, Yield attributes, Nutrient uptake, Soil health

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