

ABSTRACT

The application of different forms of fertilizers on *Ocimum basilicum* and *Ocimum sanctum* revealed that although both the species belong to the same genus, never the less, they exhibit variable responses to the same kind of treatments. In order to elucidate these responses, both natural fertilizers; like cow manure, and leaf compost, and synthetic fertilizers like Urea and DAP were employed. The concentrations used for the earlier treatments included 40%, 20% and 10% for both manure and leaf compost, while for the later a ratio of 1:0.5, 2:1 and 4:2 of N: P was utilized. The germination experiments indicated that *O. basilicum* was more readily germinated in different growth conditions whereas, *O. sanctum* germinated readily only in the natural conditions. The growth patterns of the plants suggested that *O. basilicum* was more sensitive to a higher concentration of manure than was *O. sanctum*. It showed a greater tendency of favorable response to higher concentrations of Leaf Compost. *O. sanctum* showed a meaningful response to even high concentrations of manure. The comparison of natural fertilization to synthetic fertilization revealed that although the plants grew at a positive pace and growth responses varied linearly with greater N: P ratio, but with the passage of time, the growth became stationery.