HARMONISING THE GROWTH AND YIELD OF RADISH WITH THE BIO-DYNAMIC CALENDAR

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Bio-dynamic (BD) farming is a unique way of farming that bridges earth and cosmic rhythms, spiritual and material world of human beings. Following a bio-dynamic planting calendar and incorporation of bio-dynamic vitalizers in the form of soil and plant amendments are the key differences between an organic and a bio-dynamic system. Aforesaid elements are vital in aligning farming activities to natural, cosmic and earth rhythms for stimulating health and quality of both soil and crop. Perennial have tested widely, yet not annuals, thus demand more scientific evidences. This study hypothesizes that universal energies can support plants, if crops are established in a special date following the rhythms of the nature *i.e.* bio-dynamic calendar and thereby may elevate the yield. This study was designed to determine the impacts of sowing date according to the bio-dynamic calendar on Radish (*Raphanus sativus* L.), which yields both roots and leaves. On-field experiment location was the James Valley Farm, Gurukele, Gampola. Radish sowed on Root, Leaf, Flower and Fruit days according to the bio-dynamic calendar. Crop was managed using different rates (100%, 75%, 50% and 25%) of BD compost coupling with BD vitalizers (BD 500 and BD 501). A sole BD compost (10 tha^{-1}) and a sole BD vitalizer (no inputs) plots were used as benchmarks. The mean fresh root weight of radish was highest in a Root day (4.41 kgm^{-2}), compared to all other days (<3.9 kgm^{-2}). Mean leaf fresh weight was 4.50 kgm^{-2} in Leaf days and significantly ($p<0.05$) higher than the rest. Both parameters of 100% BD compost was similar to 25%, 50% and 75% BD compost. Identical trends were observed for root and shoot dry weights too. The total dry weight of the Root day crop was far superior to all other days. Combining 50% and 75% BD compost with BD vitalizers were among highest yields on many parameters and were superior to benchmarks. Benchmarks were not significantly ($p<0.05$) different, yet low yielding than in combinations. This is the first set of data generated for annuals in a bio-dynamic system in Sri Lanka; thus require broader investigations in future.

Keywords: Bio-dynamic calendar, Bio-dynamic compost, Bio-dynamic farming, vitalizers, Radish