

## **Effect of vortex making on microbial number in BD500 spray suspension.**

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BD 500 is a fundamental biodynamic field spray preparation. Specially prepared BD500 is sprayed to vitalize the soil, enhance seed germination, root formation and primary root development. For spraying, 62.5 g of BD500 is dissolved in 25 litres of water in a plastic bucket by making vortex in clockwise and anticlockwise direction for one hour and the solution is sprayed immediately in one hectare area. Microbial analysis of BD500 has revealed the presence of large number of fungi and bacteria. The objective behind vortex making is to improve the effectiveness of BD500 by way of increasing microbial number and vigour. The current practice is to vortex it for one hour. The present study was carried out to see if there is a need to increase the time of vortexing so as to increase the number of effective microbes.

Samples were withdrawn from BD500 (while vortexing) after different time intervals and plated on nutrient agar, actinomycete agar and Rose Bengal Chloramphenicol Agar for estimation of bacteria, actinomycetes and fungi, respectively. The plates were incubated at  $37^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for 7 days and the number of micro-organisms were counted. It was observed that for the first 15 minutes there was a rapid increase in the number of actinomycetes and bacteria as it almost doubled. After that it increased slowly but steadily up to 90 min and 120 min. for bacteria and actinomycetes, respectively. The initial yeast and mould counts were quite low but there was a proportionate increase in their number upto 90 min and thereafter it became almost constant. However, the vigour of fungal colonies increased significantly by further vortexing.

The study indicated that vortexing for 90 min instead of 60 min may further increase the efficiency of BD500.