FINDINGS
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1. In the present investigation six VAM genera viz, *Acaulospora*, *Entrophospora*, *Gigaspora*, *Glomus*, *sclerocystis* and *Scutellospora* have been isolated from Anekal taluk and the work is *de nova* to this region.

2. A total of 4096 spores were recorded from the study area in which only 38 selected VAM spores were selected for further investigation.

3. Genus *Glomus* was found to be most dominated while genus *sclerocystis* was found to be least among reported spores from the study area.

4. Isolation of *Entrophospora colombiana*, *Gigaspora margarata*, *Glomus flavisporum* are considered to be new record from this area.

5. Sixteen unidentified VAM spores were recorded with microphotographs.

6. The seasonal fluctuation in the distribution of VAM spores in the study area may be attributed to variation in physicochemical characteristics of rhizospheric soil.

7. Soil with low phosphorus content and higher moisture level favored increase in the spore number.

8. Percent of root colonization and spore number vary from region to region and there is no correlation between them.
9. Maximum (600/50g) and minimum (94/50g) number of VAM spore were recorded from the soil sample of Ramasagar and Singsandra respectively.

10. Highest percentage of VAM colonization (66%) was recorded in the roots of finger millet grown at Hebgodi during the month of December.

11. Low percent of root colonization (47%) was recorded at Kagalipur during January.

12. Various shapes of hyphae such as X, Y, U, H etc were reported in the roots of experimental plants.

13. Prominently branched or finger shaped, irregular arbuscules were recorded in the macerated roots of all the experimental plants.

14. Vesicles were least in number at the early stage of young roots but when the plants reached 2-3 months old quite large number of deeply stained vesicles were seen.

15. Fifteen grams of mixed VAM inoculum can be recommended as biofertilizer for better growth response.

16. VAM inoculated finger millet plants exhibited significant increase in plant height, biomass production, and percent of root colonization, spore number and phosphorus uptake when compared to control.

17. Chlorophyll content and grain yield was significant in TNAU-914 finger millet variety.
18. Histochemical studies revealed that mycorrhizal plants had higher rate of metabolic activities than non-mycorrhizal plants because protein, RNA, polyphosphates, polysaccharides and enzyme peroxidase were detected in the hyphae of infected root.

19. Recommended dose (50%) of super phosphate along with *Glomus macrocarpum* was found to be most suitable for TNAU-914 finger millet variety to get significant biomass production.

20. Recommended dose (75%) of super phosphate with *Sclerocystis sinuosa*, *Glomus fasciculatum* and *Glomus mosseae* was most suitable for finger millet varieties viz, GPU-45, RAU-8 and White variety respectively. Thus VAM biofertilizer may save about 25-50% of cost on application of phosphate fertilizer.

21. Very significant increase in 'P' uptake and growth response in shoots of TNAU-914 variety was recorded when the plants were treated with *Glomus macrocarpum*.

22. Interaction studies in finger millet with VAM, PSB and *Azospirillum* brought out significant increase in plant height and plant biomass production in all the inoculum treated plants when compared to control.

23. Percent of VAM colonization and 'P' uptake in TNAU-914 finger millet variety was increased in tripartite treatment of *Glomus macrocarpum* + *Azospirillum* and *Bacillus polymyxa* when compared to other varieties.