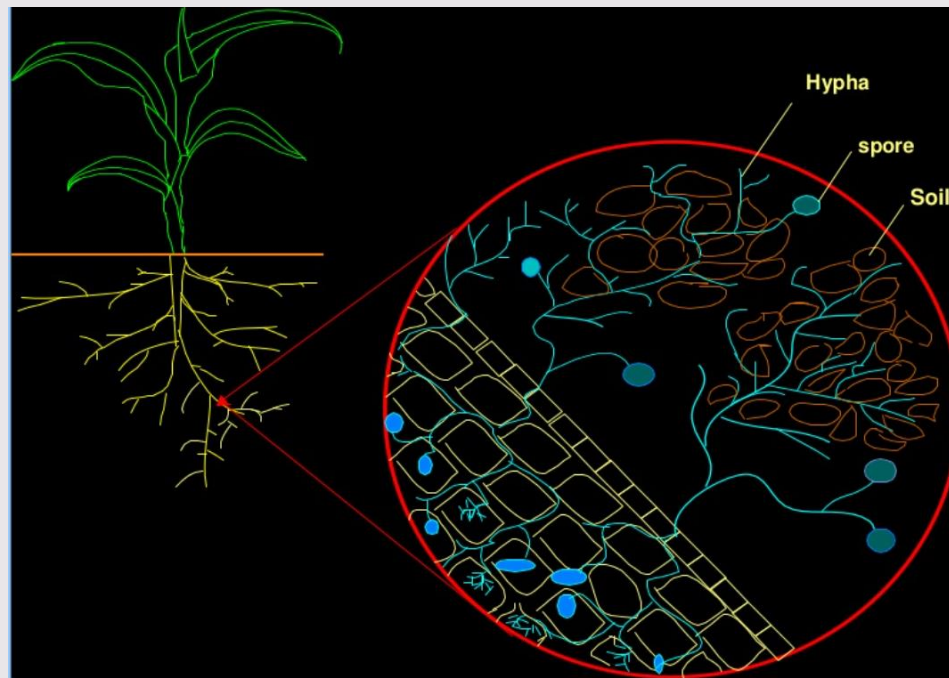




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Center for Smart Agriculture

Isolation of AM fungi-Wet sieving method and sucrose gradient method



Module 1:
Session1:



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INTRODUCTION

- Mycorrhiza forms an interface between soils and plant roots Mutualistic associations of AMF with host plants.
- Spores are adequate in number during the summer and the growth rate of roots will be maximum during this time period
- Based on morphological character like spore wall, size, colour and hyphal attachment the AMF spore was identified.



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INTRODUCTION

- In some species the hyphae is viewed under maximum magnification because of the presence of lipid droplets
- Beneficial effects of AM- used as bio-fertilizers for plant growth, especially in soils of low fertility



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WET SIEVING AND DECANTING TECHNIQUE

- Wet sieving and decanting is one of the popular technique
- 10 g of soil was mixed with 100ml of water in the 500 ml conical flask
- The soil mixture was agitated vigorously to free the AMF spores from soil and allowed to settle for 15-45 minutes
- The supernatant was decanted through standard sieves.
- By using a dissecting microscope, spores were picked by means of pipette or needle.



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SUCROSE CENTRIFUGATION TECHNIQUE

- Spores were purified by re-suspending the sieving in the 40% sucrose solution with centrifugal action.
- Centrifugation was carried out at 1750 rpm for 5 minutes.
- The supernatant was removed and poured into the sieves
- The spores that hold on the sieves are carefully rinsed with tap water.
- The spores were collected by using dissecting microscope



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Thank you...