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# Center for Smart Agriculture

## Applied Hi-Tech Horticulture



### **Module 2: Innovative Technologies in Hi-Tech Horticulture**

### **Session 10: Media and Soilless media used for raising seedlings**



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## Types of media:

- ❖ **Soil:** This is the most commonly employed medium for pot plant.
- ❖ **Sand:** Used for rooting of cutting.
- ❖ **Peat:** It consists of the remains of aquatic marsh, bog preserved in under water.
- ❖ **Sphagnum moss:** Used for air layering.
- ❖ **Leaf mold:** Used for potting mixture.



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## Continues....

- ❖ **Saw dust:** Used in nursery as soilless substrates
- ❖ **Grain husk:** Byproduct of the rice milling industry, It is extremely light in weight and good drainage facility.
- ❖ **Cocopeat:** Byproduct of the coconut industry and commercial used in vegetable grafting and plug tray.
- ❖ **Vermiculite:** Used as soilless root substrate with high nutrient and water holding capacity.
- ❖ **Perlite:** It 3-4% water holding capacity.



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**Cocopeat**



**Soil**



**Peat Soil**



**Spagnum moss**



**Vermiculite**



**Perlite**







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# Structure of nursery

1.Green house



**Green house**

2.Shade net house



**Shade net house**

3.Walking tunnel



**Swastik Agri Solution Co  
Walking tunnel**

4.Low tunnels

5.Mist Chamber



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**Low Tunnel**



**Mist chamber**



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## **Advantages of nursery management for greenhouse cultivation**

- ❖ Plants are protected from biotic stress and abiotic stress
- ❖ Due to use of artificial soil-less media is commonly free from soil borne disease and nematode as compare
- ❖ Minimum weed infestance.
- ❖ Low cost labour.
- ❖ Germination per cent is high.
- ❖ Year round production of seedling and not severe problem in rainy season.
- ❖ Minimize the infestation of pest as well as cost of pesticides used.
- ❖ Early seedling production gives higher price in the market and economically more profit.





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# THANK YOU