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# **Center for Smart Agriculture**

## **Protected floriculture**

**Module 1: Importance and types of protected structure**

**Session 3: Types of protected structure**  
**(Shade houses and Screen houses)**



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- Shade houses and screen houses are the predominant types of porous-roof structures.
- The main difference between them is the color and mesh of their nets.
- Shade houses are usually made of different colours
  - ✓ Black,
  - ✓ Green,
  - ✓ White



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- Screen houses protect crops from high winds and prevent entry of vectors
- ✓ Mites
- ✓ Thrips
- ✓ Aphids
- They are usually covered with white nets.



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- The level of protection a screen house provides against arthropod pests is related to the mesh of the net used in the structure.
- In this case the porosity of the nets will represent the porosity of the windbreak.
- **Disadvantages of screen houses:**
  - ✓ Low air movement & High temperatures.



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- The use of screen houses in subtropical and tropical areas may be limited during the rainy season because of the high incidence of physiological disorders and propagation of disease-causing pathogens.



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- Shade net house is a framed structure made of materials :
  - ✓ GI pipes
  - ✓ Angle iron
  - ✓ Wood or bamboo
- It is covered with plastics net having different shade percentages.



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- A wide range of shading nets is available in the market which is defined on the basis of the percentage of shade they deliver to the plant growing under them.
- Shade nets are available in different shade percentages or shade factor i.e 35%, 40%, 50% 75% and 90% .
- In most of cases 50% is recommended for covering general shade house.



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# Advantages

- Helps in cultivation of flower plants, foliage plants, medicinal and aromatic plants, vegetables & spices.
- Used for raising nurseries of fruits and vegetable.
- Helps to enhance yield during summer season.
- Protection against pest attack.



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- Protects crops from natural weather disturbances such as wind, rain, hail, frost, snow, bird and insects.
- Used in production of graft saplings and reducing its mortality during hot summer days.
- Used for hardening tissue culture plants.



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# Applications of shade nets

- Nursery propagation, floriculture, indoor plants, vegetables, tea, coffee, spices.
- Hardening of plants.
- Cattle shed, Fish Pond, Poultry Farming etc.
- Drying of various Agro products.
- Acts as a wind breaker.



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## Net houses

- Shade house and net house are often synonymously used but more correctly a net house is enclosed with perforated screen primarily to act as a barrier for the entry of insects and pests.
- Insect-proof nylon nets are available in different intensities of perforations, ranging from 25 mesh to 60 mesh.



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- Nets of 40 or higher mesh are effective means to control entry of most flying insects and save crop from diseases.
- Higher mesh size, however, reduces the air exchange of the structure.
- UV- stabilized nets are now available which have a longer life.



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**THANK YOU**