

ROOM
to GROW
content packet



GROWING STRUCTURES



key terms

- growing structures
- cold frame
- hothouse
- shad house
- high tunnel
- greenhouse



background information

When driving through a neighborhood a variety of houses styles, colors, and styles grace the streets. Homeowners have a number of options to choose from when building or buying a house. Individuals building growing structures have those same types of options. A great deal of consideration must be given in selecting the correct type of growing structure needed to create an ideal environment to grow crops based on the climate and region.



additional information

- www.ludy.com
- <http://stuppy.com/>
- www.growersupply.com
- www.roughbros.com
- www.hummert.com
- <http://osufacts.okstate.edu>



PARTS OF A GREEN- HOUSE



key terms

- curtain wall
- rafter
- column
- side post
- purlin
- ridge vent
- side vent
- covering (glazing) material



background information

Like a house, a growing structure has various key features that help create the ideal growing environment for crops and plants. Once the selection of plants or crops has been determined, the growing structure must be designed and built to accommodate the specific needs of the plants/crops.



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HEATING AND COOLING



key terms

- solar
- forced air (unit heat)
- infrared
- radiant
- stream
- ventilation
- ridge vent
- side vent
- circulation
- exhaust
- evaporated cooler



background information

There is no standard heating and cooling system for growing structures. The needs of a structure vary depending on the location of the structure, region, climate, and plant species selected to grow. Making educated decisions regarding heating and cooling systems help create the ideal growing environment.



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GROWING MEDIUMS



key terms

- growing media
- perlite
- vermiculite
- peat moss



background information

The type of media in which seeds and plants are placed has a huge impact on a plants ability to grow and thrive. Being knowledgeable about growing medium options along with their advantages and disadvantages is vital to yielding quality food products



additional information

- www.ballpublishing.com/growertalks
- <https://extension.purdue.edu>
- www.growersupply.com
- www.hummert.com
- <http://osufacts.okstate.edu>
- www.extension.uga.edu/garden/garden-fruits-vegetables



NUTRIENT REQUIRE- MENTS



key terms

- nutrient
- fertilizer
- liquid
- granular
- organic
- inorganic
- elements



background information

Plants require sixteen essential elements to grow and thrive. The missing elements not provided by a plant's environment (i.e., water, air, and growing medium) must be supplemented with fertilizer in order to balance the nutritional needs of the plants.



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PEST MANAGEMENT



key terms

- pests
- management
- insects
- nematodes
- mites
- rodents
- fungi



background information

Pest knowledge and management is vital to a plant's ability to grow and thrive. Producers must be able to identify pests and determine a control method that is best suited to solve the pest problem.



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PLANT DISEASES



key terms

- disease
- symptom
- pathogen
- disease triangle
- random
- uniform
- cultural condition
- host



background information

When we come down with a cold or aren't feeling well, we typically investigate to find out what might be lurking in our bodies and making us feel sick. We work quickly to get the illness under control and generally feel better in a short period of time. The same thing can happen to plants—they can become sick too. However, remedying their disease and reversing its effects are not always quite as easy. Being able to identify symptoms of plant disease early and provide a remedy is the key to the plant crop surviving and continuing to thrive.



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