Hobby Greenhouses for NE Florida

By Terry Bottom

All contents copyright © 2008-2017 by Sue and Terry Bottom. All rights reserved. No part of this document or the related photos may be reproduced or transmitted in any form, by any means without the prior written permission of the author.
WHAT WE REALLY NEED IS A SHADE HOUSE THAT CAN BE WINTERIZED

Controlled shade and ventilation are the primary considerations for successful growing.
PLANNING FACTORS

• Location
• Building codes & other controlling factors
• Greenhouse types
• Building materials
• What systems to include
• Contractor vs do-it yourself
LOCATION

Site conditions will determine what kind of orchids you can grow

- Southern exposure with an east-west orientation is suggested by the experts
Select location carefully
note where shade lines fall for summer & winter
Pay attention to seasonal sun angles
Building Codes & Other Controlling Factors

- City & county building codes
- Neighborhood association guidelines
- Budget
- Spouse
- Nosy neighbors
City & County Building Codes

- Front, back & side setbacks
- Engineered drawing
- Wind loads
- Permanent vs. temporary structure
Neighborhood Guidelines

- Deed restrictions
- Out buildings limits
- Building materials
- Approval process / ARB
- Loopholes
Budget

• Build all at once

• Build step by step
Spouse & Nosy Neighbor Factors

- Subtly evaluate positions
- Identify conflicts & prepare trade offs
- Jointly approve design
- Share orchid habit
- Transformation
Greenhouse Types

- Freestanding rigid structural frame in wood or metal
• Attached Rigid Structural Frame
• Architecturally Matched Structure
• Kits: Lean-to
• Kits: Freestanding
• Kits: Portable Tubular Frame
Conversion
• Cold Frames
• Freestyle
Building Materials

• Structural frame
• Coverings
• Floors
Structural Frames

- Wood
- Galvanized steel
- Aluminum
- Plastic
Cover

- Shade cloth
- Film
- Single layer sheets
- Double layer sheets
- Metal lathe
- Combination
Floor

- Fabric
- Gravel
- Concrete / Pavers
- Combination
Planning Systems

- Ventilation
- Air circulation
- Cooling with water
- Heating
- Electricity
- Water delivery system
- Benches & hangers
Ventilation

- Open walls
- Shade cloth walls
- Roll-up curtains
- Wall vents
- Roof vents
Air circulation

- Horizontal air flow fans
- Vent tubes
- Exhaust fans
Cooling with water

• Water wall
• Overhead misting
• Under bench or floor misting
Heating

- High wattage lights
- Space heaters
- Kerosene & propane space heaters
- Electric & propane forced air
- Radiant heating
- Under bench misting
Electricity

- Extension cord & GFI outlet
- 110 volt 30 amp
- 110 volt 100 amp
- 220 volt 150 amp
Water delivery system

- Hose
- Water source
- Tie-in
- Siphon
- Injectors
Benches & Hangers

• No benches
• Purlins as hangers
• Hangers
• Combination benches
• Benches
How to build

- **Do-It Yourself:** assemble kits, build small wooden structures, install water, & add accessories.

- **Contractor:** pour concrete, frame larger wood & metal structures, tie-in to existing structures, run major utilities, & install complex systems
What I’ve Learned

- You will run out space
- Get a light meter
- Analyze & know your water
- Concrete gets slippery
- Filter your water
- Shade cloth may need seasonal changes
- Propane heat is expensive
- Wet walls will eat your greenhouse
- Ventilation is the most important factor
- Automate whenever possible
- Preventive maintenance save lives
Recommendations

• Put shade cloth on top of covering.

• Portable tube frame kits are a good first greenhouse & can be rebuilt.
Recommendations

• Roll-up curtains are the way to go.

• Wooden kits are a waste of money, don’t buy one, I did.
Recommendations

• The most economical & practical house to build yourself is a treated lumber frame, PVC roof with film & shade cloth on sidewalls of structure.

• Aluminet shade cloth is worth the extra money.
Recommendations

- Best Portable Kit: one of the Solar Star system kits from Farmtek (single wall only, no inflatable)

- Best Code-legal Kit: the Frances from Atlas greenhouse systems.
Happy Building