UF UNIVERSITY of FLORIDA | IFAS EXTENSION

Highlights in Horticulture

Baker County

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Dear Extension Friends,

A huge thank you to everyone who participated in our online newsletter survey last month! The information will be used for reporting purposes to demonstrate community impact, while the comments and suggestions you provided will help us to improve the newsletter for you—the reader. To those that made article suggestions, I will do my best to fulfill your requests—starting with this newsletter. From our Extension family to yours, please have a safe and happy holiday season!

Best Regards,

Alicia

Alicia R. Lamborn
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Building A Cold Frame

If you're like me, then you have a lot of tropical plants that won't tolerate cold winter temperatures and you probably prefer not to break your back hauling them in and out of the garage every time a hard freeze comes. If this is the case and you don't own a greenhouse, build yourself a cold frame structure or temporary greenhouse to house your tender plants until spring. This structure will also work well for getting an early start on spring vegetable seedlings, although you may need to modify the size to fit your needs.

These instructions will help you build a basic structure that is a Quonset design, 3' high x 6' wide x 20' long (similar to the photo shown above). This structure will require venting which can be done by opening the ends or rolling up one side of the plastic cover and then closing again later in the day. Depending on the plant material, closing the structure may only be necessary when temperatures are predicted to fall below 32 degrees.

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‘Carolina Sapphire’ Arizona Cypress

If you research this plant, you will find that it goes by different common names (Arizona Cypress, Smooth Cypress, Smooth Barked Arizona Cypress), but also different scientific names (*Cupressus glabra or Cupressus arizonica var. glabra),* and even cultivar names (‘Carolina Sapphire’ or ‘Carolina Safire’). But whatever you choose to call it, the ‘Carolina Sapphire’ Arizona Cypress is an attractive tree with blue/gray leaves that form a narrow pyramid. The foliage of ‘Carolina Sapphire’ is said to be one of the brightest blues you will ever see and the outer reddish-brown bark peels off each year to reveal the smooth inner bark which is bright red.

A native to the American southwest, this tree performs exceptionally well in hot, dry conditions but is also suitable for planting in north Florida for use as a screen, hedge, windbreak, or even a landscape specimen. This fast growing tree has a spread of only 10-15 feet, but can reach 50-70 feet tall, with young trees growing up to 6 feet each year.

If you decide to plant a ‘Carolina Sapphire’ in your landscape, be sure it gets full sun and is planted on well-drained soil. If grown with too much moisture or planted on poorly-drained clay, a shallow root system will develop making it susceptible to wind damage and other problems, thus shortening the life of the tree. No insect pests are of major concern, but watch for stem canker disease which has been a problem for these trees in various parts of the country.

Photos by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida.

Caring for Houseplants

As the weather gets colder, many of us will need to start moving our potted plants to warmer locations, which typically include inside the house. But adverse conditions inside a home can make it challenging for plants to make it through winter, even without the freezing temperatures.

The most important factor for indoor plants is adequate light. Flowering plants, plants with highly colored leaves, and succulents will grow best in a window where they receive full sunlight. Foliage plants, such as ferns and philodendrons, will prefer a window receiving indirect light such as a north-facing window. Artificial lighting can also be used to supplement natural light as needed.

Most plants grow well indoors with temperatures between 65-75°F but sudden changes can injure plants. Avoid hot or cold spots, including on top of the TV, in the path of heater vents, and windows that are not energy efficient (letting a lot of cold air in at night). Humidity is another factor to consider. Most plants grow best at 40-60% humidity with the average home being well below 40% during winter. Low humidity levels will cause your plant to lose water from the leaves faster than the roots can absorb water, causing brown leaf tips and flower buds to drop. Installing an inexpensive humidifier can help, as well as placing plants close together or on a bed of wet gravel. The gravel should be 2-3” deep but never allow the plant to sit in water. As the water evaporates, the humidity level will increase around the plant.

Overwatering is the number one cause of indoor plant death. Be sure to water only when the soil feels dry, when the soil shrinks away from the sides of the pot, or if the pot feels light when you pick it up. When needed, apply enough water until it runs out the bottom of the pot. You can also water from the bottom of the container but will need to water from the top at least once per month to wash out the excess salts that build up. Either way is fine but do not allow water to stand in a saucer too long.

Building A Low Cost Vertical Tower for Vegetables, Herbs, and Fruit Crops

Need a new way to grow edibles that uses less space? Try growing vertical rows.

Small farmers and homeowners have a long history of innovative production practices to reduce costs and improve yields of vegetable and small fruit crops. One such innovative creation is the homemade vertical growing system which can be built at a fraction of the cost of commercially available systems, without occupying premium land or yard space, and by utilizing materials available in the home and local hardware store.

This system uses plastic bottles or pots filled with potting soil or another growing medium, which are stacked at different levels on a supporting pole.

Materials needed:

- One 4 x 4 inch post or pole, 8 ft tall
- For four levels, sixteen 2 L plastic bottles (e.g., soda bottles)
- A box of ¾–1 inch wooden screws
- 10 ft of ¾ inch or 1" diameter water hose or irrigation tubing
- 4 ft of plastic spaghetti tubing (¼–½ inch thick)
- Four irrigation emitters or "spitters"
- String
- Four 3 gal pots or similar
- Growing media (about 20 gal)
- Black or white spray paint
- Sixteen pieces (about 6 inches long) of a 1 inch diameter pipe
- Miscellaneous pipe fittings (e.g., elbows)
- Water timer (optional)

Tools required: A pair of scissors, a screwdriver, a single-hole puncher, and a shovel.

Assembling the vertical system:

1) Cut the bottom part of the soda bottles as indicated in photo (right). Be careful to leave a 1 ½ inch tab wide enough (about 3 inches) to punch a hole in the middle of it. This tab holds the bottle when hanging on the pole. Paint each bottle any color to reduce sunlight penetration.
2) Measure the underground 2 ft of each pole
3) Dig hole; Set supporting pole in the ground; fill in and pack the removed soil
4) Place one screw per side of the pole for each of the four levels
5) Install irrigation pipes and water timer (optional) on top and bottom of each pole
6) Tie the necks of each bottle together within each level with a piece of string
7) Fill the bottles with growing medium
8) Install the four pieces of spaghetti tubing on top of the pole and place one emitter on each for each side of the pole
9) Install the 1 inch pieces of pipe on the necks of each bottle to ensure water drainage to the level below and place the 3 gal pots filled with growing medium on the ground
10) Saturate the growing medium with water before planting

For visual step by step assembly instructions, visit the webpage: http://edis.ifas.ufl.edu/hs1186

Crop Possibilities & Recommendations: The upper levels of the tower tend to receive more sunlight than the lower ones. Therefore, crops with high tolerance to low-light conditions should be planted accordingly. Also, crops with moderate to high salinity (fertilizer) tolerance should be considered for the ground level. Possible crops for the two to three upper levels of each tower are strawberry, eggplant, determinate pepper, and leafy vegetables and herbs (e.g., lettuce, arugula, cilantro, basil). For the lower levels, onion, leek, collards, and other cole crops are suitable.

Adapted and excepted from: Santose, B. M., Salame-Donoso, T. P., and Arango, S. C. (2010). *Solutions for Small Farmers and Home Gardens: Building a Low-Cost Vertical Soilless System for Production of Small Vegetable and Fruit Crops*. University of Florida. http://edis.ifas.ufl.edu/hs1186

Building A Cold Frame (continued from page 1)

Site Selection: Choose a site that is fairly level with a water source nearby and orient the structure North-South (east-west orientation supplies more overall light, but north-south orientation supplies more uniform light).

Materials Needed:

4	3/4" schedule 40 PVC pipe, 20' lengths
1	12' x 30' white copolymer film, 6 mil
32	3/4" electrical conduit hangers
1	2" x 8" x 12' treated lumber
4	2" x 8" x 10' treated lumber
4	Metal mending plates
1	200 ft. roll gauge steel wire (or heavy cord)
80	Wood screws

Tools Required:

Carpenter saw	Electric drill	Tape measure
Builder's square	Pencil	Garden rake
Side cutting pliers	A friend	

Construction:

1 - Cut the 2" x 8" x 12' lumber in half, making two pieces 2" x 8" x 6' that will be used for the ends of the bed.

2 - Butt the ends of two of the 2" x 8" x 10's together and nail/screw securely using mending plates on each side, so that you have a 2" x 8" x 20' side board (kickboard). Repeat with the remaining two pieces of 2" x 8" x 10's.

3 - Lay kickboard sides on edge 6' apart on the leveled area and place a 2" x 8" x 6' section outside each end. Square the corners, then nail/screw together securely. (Screws will allow for easier breakdown, if required.)

4 - At each of the four corners (on the inside edges), attach a conduit hanger using screws so that the top of the hanger is flush with the top edge of the boards. Any nails/screws that come through should be bent over so that they will not tear the copolymer cover. Note: the photo demonstrates this step, only the conduit hangers are placed on the outside of the kickboards.

5 - Repeat step 4, attaching conduit hangers flush with the bottom of the boards in each of the four corners.

6 - Starting from the center of the top conduit hangers, mark off the kickboards along the length of the structure at 33 13/16 inch intervals.

7 - At each of the marked intervals, center and screw in two conduit hangers (at top and bottom) as in steps 4 & 5.

8 - Cut the four 20' lengths of PVC pipe in half so that you have eight 10' pieces.

9 - For each section of PVC pipe, slip one end down through a set of conduit hangers, bend the pipe in a bow across the width of the structure, and slip the other end of the pipe down through the opposite set of conduit hangers.

10 - Place containerized plants inside the structure and water thoroughly. Note: Plants that are more cold tolerant should be placed around the perimeter with the least cold tolerant plants placed in the middle.

11 - Using flexible wire or heavy cord, tie the bows of PVC pipe together so that they cannot flex to either side. An alternative is to use a single PVC 20' length centered at the top and attached to each bow to add greater rigidity to the frame.

12 - Center the 12' x 30' sheet of white copolymer film over the hoop frame.

13 - The cover can be secured by covering the 1' of surplus film along one of the long sides with soil. To allow easy access to the plants, the other three sides of the film can be held down with boards, rocks, or pieces of wood.

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