

## **Canned Goods: Gardens in Containers**

Practical, novel ideas for choosing a container and the plants to fill it, with maintenance tips for a stunning out-of-ground display.

### **I. The container**

#### A. What is our attraction to containers?

1. Moveable; serving multiple areas or as color for non-garden locations
2. Controlled gardening
3. Packages attractive in their own right
  - Serve as or complement garden's "bones" or architecture
  - Express your tastes and interests, even out of season

#### B. On choosing containers

1. They're "hard structures" -- choose to complement other hard structures
2. Material differences -- what the pot's made of? May be + or -
  - Most plants will do well in most materials. People are more choosy.
  - Terra cotta *to acquire aged look - paint with manure solution...*
    - +/- weight can be problem; but is good for stability
    - + color is good, esp. with low-growing plants
    - + porous, good for oxygenation of roots; esp. alpiners & orchids
    - + less fertilizer build-up
    - + less risk of overwatering
    - may need more frequent watering and fertilizer
    - may be very frost sensitive (pot cracks)
  - Glazed ceramic
    - wide variance in cold tolerance
    - /+ at best: drainage & fertilizer retention like plastic
    - + As "jardiniere" or "cache pot" pot-in-pot. Looks, stability.
  - Plastic (polypropylene, plus polyethylene for strength in cold)
    - + unlimited colors, sizes, shapes
    - + dark colors warm more quickly in spring
    - + whites absorb less heat in summer
    - +/- light weight makes moving easy; more wind-blowing
    - +/- need less water; more difficult to water (can't tell)
    - + usually need less fertilizer (not zero fertilizer, though!)
    - sunlight deteriorates and cold can crack it
  - Fiberglas
    - + plastic's advantages with more longevity - less brittle in cold
    - tends to be more expensive
  - Wood *heat: root growth effectively stopped at 90 degrees*
    - + might be best insulator of common materials, for heat & cold
    - must be treated, even then will rot over time
  - Stone and concrete *weather new concrete to dissipate lime (happens on display)*
    - /+ heavy; for large plants needing stability, this is a plus
    - + very durable if given dry footing
  - Metal
    - difficult unless cache-pot; conducts heat and cold too readily

### 3. Shape and dimensions

- All sizes! Why not?!
  - Larger pots require less frequent watering
  - Larger pots more stable for tall/big items and supports
  - Overpotting can cause trouble; soil too wet that roots don't tap
  - Too tiny can dry out too quickly
- Good patio size 12" x 12", 18" or more, better
  - Bigger than 12" by 12", consider casters for mobility
- Window boxes, most pots, best are minimum 8" deep, 6" wide
- For permanent plants:
  - slow-growing, pot sized to cover top of plant at purchase
  - moderate growth, pot 1-1/2 times as big as top of plant
  - fast growing, any size; plan to repot, prune roots, etc.
- Tapering shape allows for easier repotting - root ball slides out
- Rim: adds strength; hold or stack it easier chipped rim weakens it
- Rectangular better for saving bench space
  - May be bad for air circulation (foliage touches, so do pots)
- Mesh sides, sides with openings: strawberries, orchids
- Half baskets - think about the heat on that wall
- Hanging baskets
  - Tough place for plants to grow, all roots exposed
  - Bigger, better
  - Sphagnum peat lining wire best for insulation & weight
- Window boxes
  - Slightly less long than the sill opening, if will sit on sill

## **II. The plants: what grows in containers?**

### A. Trees, shrubs, perennials, annuals, tropicals, veggies, water plants

- Special considerations for permanent plants:
  - Container life expectancy to match plant life expectancy
  - Root pruning or repotting
  - Wintering

### B. Hardiness of perennials and woody plants

1. Choose 1-2 zones hardier - sides more exposed, roots colder
2. Insulative properties of pot important to winter survival
3. Drainage critical to winter survival clay pots with best drainage last best, plant AND pot
4. Some trees, shrubs, perennials long-lived in pots, "tough out" winters:
  - Trees: Amur maple (*Acer ginnala*) crabapple (*Malus* varieties)  
Amur cork tree (*Phellodendron amurense*)  
hawthorn (*Crataegus*) lacebark elm (*Ulmus parvifolia*)  
scholar tree (*Sophora japonica*)
  - Shrubs: *Cotoneaster* species sandcherry (*Prunus cerasifera*)  
*Euonymus* (evergreen) silverberry (*Elaeagnus commutata*)  
pine (*Pinus* dwarf types) smokebush (*Cotinus coggryia*)  
juniper (*Juniperus* dwarf or low-grow)
  - Perennials (1-2 zones hardier if unprotected over winter):  
bamboo; ornamental grasses, *Sedum*

- C. Tough situations -- air pollution and reflected heat
- Tolerant of air pollution (exhaust gases, etc.) *Catharanthus*, *Dianthus*, *Euonymus fortunei*, English ivy, candy tuft, sweet alyssum, *Primula*
  - Heat tolerant plants can take it -- but not necessarily dry soil, too
- D. Grouping plants in one pot
- Similar cultural needs
  - Texture, shape, foliage color considered before flower
- E. Grouping pots together
- Less moisture loss
  - Better "garden" look
- F. Sharing some great combos:
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### **III. Potting mix**

- A. Potting mix vs. potting soil
1. Potting mix generally soilless; potting soil has some real soil
  2. Stick with potting mix. There is no perfect mix but generally:
    - Better drainage
    - Better soil aeration
    - Light weight is a "plus." If weight needed can add sand
    - They have predictable reactions to water and fertilizer
    - Cheaper than any appropriate loam (\$ to sterilize)
  3. Most consist of bark, peat and a lightener (better air/water movement)
    - Perlite long lasting (doesn't crush), inert, neutral
    - Vermiculite (glitters) crushes over time; some potassium; caution
    - Bark is hammered, sprayed with N and composted
    - Peat is sphagnum peat -- bigger chunks better than fine
    - May have coir, leafmold, pine needles, sludge, compost
- B. How much will you need?
1. Figure pot interior size (remember HxWxD, and  $\pi R^2$  for circle's area)
    - 1 gallon of mix fills 231 cubic inches
    - 1 cubic foot of mix fills 1,728 cubic inches
  2. Enough to repot annually, and replace mix in annual/vegetable pots
- C. What amendments might you need?
1. Coarse sand for weight (not fine-, sharp-, or builder's sand)
  2. Water absorbent polymers
  3. Slow-release fertilizer
    - blood meal (N), bone meal (P), greensand (K)  
also cottonseed meal, superphosphate, rock potash
    - Osmocote or Once
  4. Mulch -- for larger, permanent plants. As for garden, but non-blowable.

## **IV. Planting**

### **A. Drainage**

1. Drill holes, if none there, or use pot-in-pot
2. Don't crock the pot, except one piece over large drain hole (clay)
  - Most plastic pots already crocked
  - Old way simply made soil less deep, did not improve soggy soil
3. Feet are always a good idea
  - Air movement under pot, better for plant/roots and surface
  - Especially important in winter
4. Using up to 25% perlite in the mix keeps mix very well aerated
  - May make the difference in winter survival of pot and plant

### **B. Positioning plants**

1. 1/2 to 1 inch below pot rim; 2" below if will be mulched
2. Angle root balls of cascading plants
3. Stakes needed -- best are wide based, placed in pot before potting mix

### **C. Tips**

1. Don't hold stems and pull plants from pots; de-pot properly
2. Don't over-pack soilless mix
3. Soak clay pots for at least an hour before filling
  - if dry, can wick much water away from newly planted plant
4. Window boxes: pots-in-pot has advantages; moist sphagnum between
  - Drain holes even with pot-in-pot
  - Use liner in wooden box
  - Coat wooden interior with copper-napthenate preservative (extends box life; this type non-toxic to plants)
5. Make clay look older, paint with manure solution (!)

## **V. Care**

### **A. Watering**

1. Don't wait for wilt: check twice daily unless very large container
  - Check by feel 1 to 2" deep.
  - Planting mix that dries out may need immersion to re-wet
2. Large pots and plastic may need water less frequently
3. Acid-loving plants - water may be alkaline; collect and use rainwater
4. Self-watering pots are good if potting mix good. Check by feel.

### **B. Fertilizing**

1. Wait 3-6 weeks after planting to begin fertilizing
2. In soilless mix: water soluble every 7-10 days "with micronutrients"
3. Slow release type
  - mixed in at planting, scratched in annually for permanent plants

### **C. Cutting: deadheading, pinching and pruning**

1. Pinch regularly for bushiest growth
2. Deadheading prolongs bloom period, reduces risk of fungal disease
3. Prune topiaries in late summer, removing almost all new growth

#### D. Repotting and root pruning

1. When to repot:
  - Young plants: often when roots cover exterior of ball, before they spiral
  - Older, slower plants when excessive roots out drain holes
2. Best when plant about to start growing - spring, or actively growing
3. Keeping a large plant small: depot, wash pot, put 2" layer new mix
  - Remove top and bottom 2" of potting mix from old ball; replace
  - May require cutting roots
4. Root prune larger plants in-pot
  - All root pruning before plant starts active growth. Early spring.

#### E. Problems

1. Rootbound
2. Leaves dying
  - Fertilizer problems
  - Light problems
  - Root problems
3. Pests: aphids (roots, too), whitefly, mites, mealybug, scale, gnats
4. No bloom
  - Fertilizer adjustments
  - Light, heat, or inconsistent moisture problems
5. Efflorescence -- chalky film on clay pot
  - From clay
  - Toxic, and reduces porosity
  - Rinse off with water
6. Moss/algae on clay pot
  - Reduces porosity; scrub off

#### F. Moving the containers

1. Never easy on the back
2. Tough on plants: bud drop, leaf drop

#### G. Winterizing

1. A matter of insulation and drainage

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