

# Growing Plants in Containers

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**COLORADO STATE UNIVERSITY  
EXTENSION**



# What is Extension?

## *Where University meets Community*

- We're the outreach arm of Colorado State University (your land grant institution) that can provide you with information to use every day
- Our offices have the following programs and services:
  - Horticulture and Master Gardeners
  - 4-H Youth Development
  - Food Safety and Food Preservation
  - Agriculture and Natural Resources
  - Community Development (and more!)

[Extension.ColoState.edu](https://Extension.ColoState.edu)



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Master Gardener volunteers answer horticulture questions about

Vegetable gardening

Flowers

Trees

Shrubs

Lawns

Pruning

Watering

Plant disease & diagnosis

Insect Problems

Composting

And More!

### **Get Advice**

Contact a Master Gardener volunteer  
from 9-noon, 1:30-4:30, Mon – Fri.

Reach us at 720.733.6935 or email  
[mgardenr@douglas.co.us](mailto:mgardenr@douglas.co.us)

Web: [www.douglascountyextension.org](http://www.douglascountyextension.org)

Douglas County Extension Office  
410 Fairgrounds Drive in Castle Rock  
"at the Fair Grounds"

# Why garden in containers?

- Limited time
- Portable
- Mobility and Health
- Gardening with children
- Lack of space
- Poor soil
- Exposure
- Sun
- Altered ecosystem
- Enjoy change







# Consider Your Site

- Views to enhance or block
  - Fences, stones, water features, plants
- Available exposure/light
- Microclimates
- Use of space
  - Kids, pets, storage
- Traffic patterns
  - Doors, gates and trash
- **Availability of water**











# Grow Up!

- Height makes small spaces seem larger with arbors, pergolas, and trellises
- Annual flowers
  - Scarlet Runner beans, black-eyed Susan, nasturtium
- Vegetables
  - Cucumbers, peas, pole beans
- Perennial vines
  - Honeysuckle, clematis, hops
- Roses
- Woody plants











# Placement of Containers

- Grouping like-containers together increases impact
- Adds formal touch
- Creates “theatrics” in the garden
- Maximizes dramatic effect





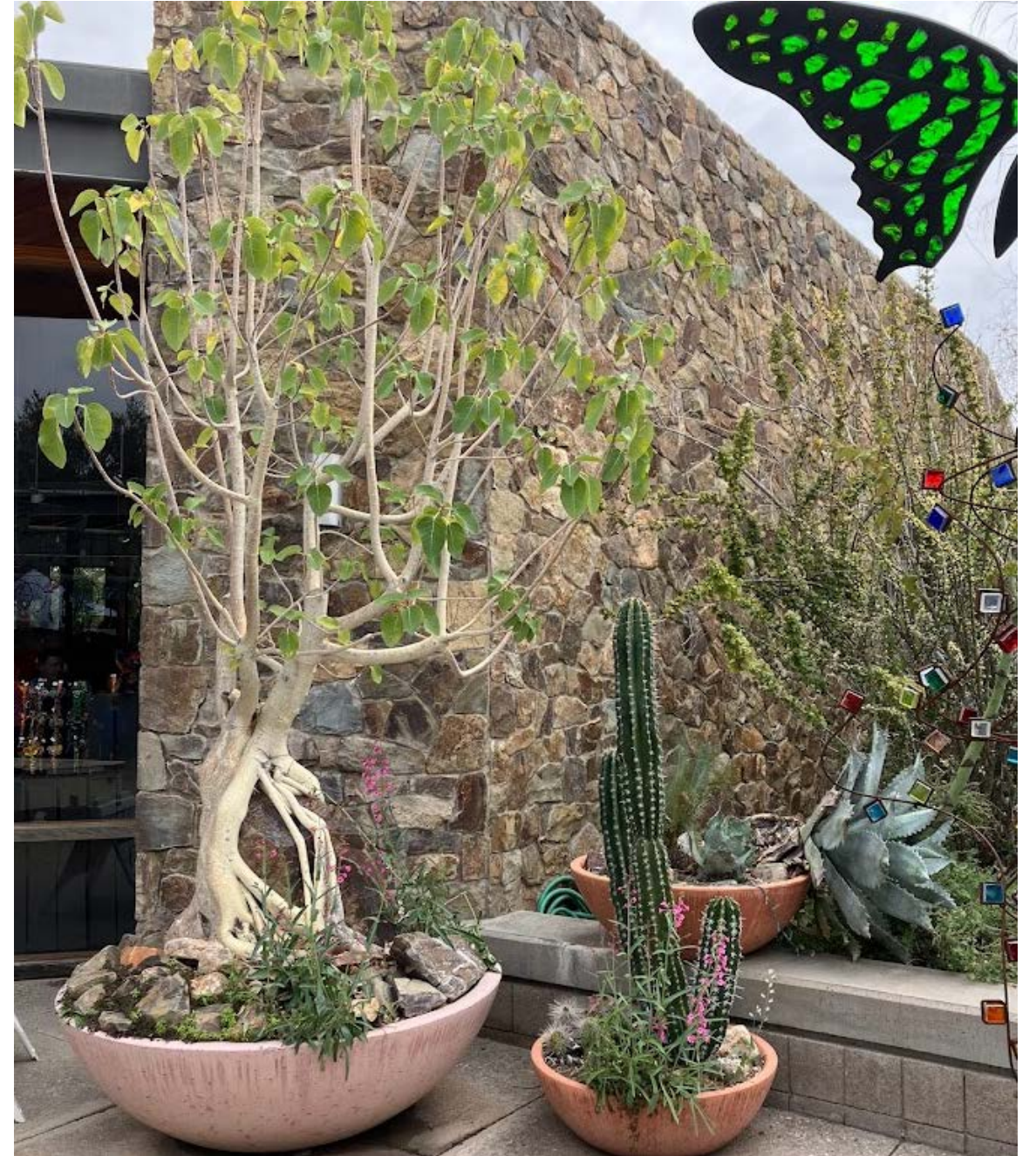






# Container Displays

- Place pots in unexpected places to add drama
- Hard-to-grow plants or those not hardy for Colorado can grow in containers





# Choosing a container



- Anything goes—as long as there's drainage
- Avoid these:
  - Without drainage
  - Containers that previously held toxic substances
- Use with caution
  - Unlined moss baskets
  - Topsy-turvy planters



# A Note about Wood Containers for Edibles:

- All treated lumber sold since 2004 is safe for use with edibles—this includes containers
- Use rot-resistant wood, like redwood and cedar
- If in doubt, use another container or do pot-in-pot



# Size

## Depth-

- 6 to 8 inches minimum

## Volume-

- Tomatoes and squash-4-5 gallons per plant (14" or larger pot)
- Dwarf tomatoes, peppers and chard 1-2 gallons per plant (8" or larger pot)
- Many root vegetables, onions, and greens- 3 pints (4" or larger pot)
- Bigger is (Almost) Always Better





# Weight



How tall will the plants be? Taller plants benefit from heavier pots.

# Material- Porous?



Porous

vs

Non-Porous



# Material- Soil Temperature



Color and material affect soil temperature

# Wheels



Move containers out of the way or keep in sun.



# creating getaways

- Mediterranean-inspired
- “Zen”
- Tropical
- Thematic, like Scripture Garden, or Grandma’s Garden





# Details about Media (“Soil”)

- Requirements:
  - Provide water, nutrients, and support for plants
  - Well aerated and well drained
  - Lightweight
- Using “garden soil” (native or purchased) is often too heavy, dense, and compacts easily
  - May dry out rapidly, contain fungal pathogens, weed seeds, and disease organisms

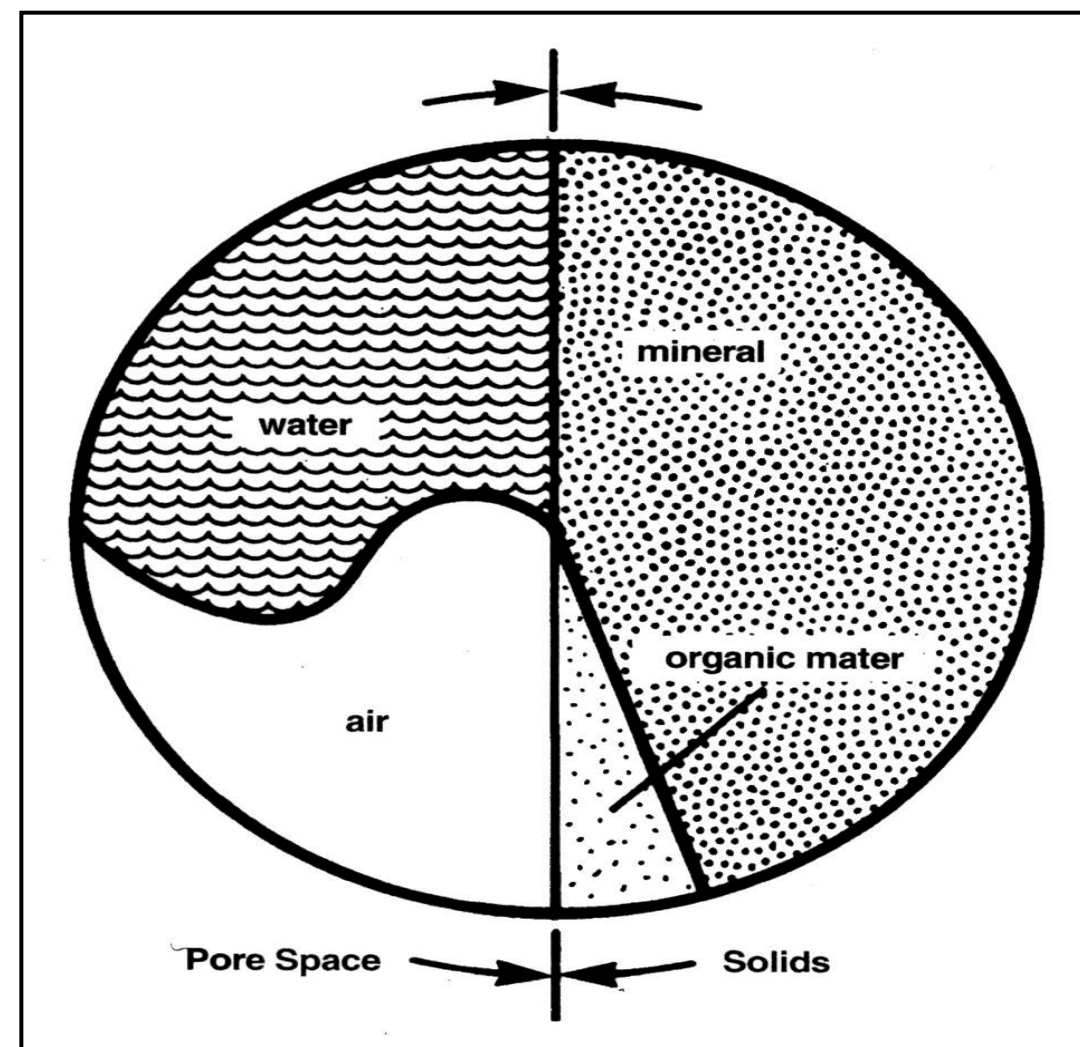




# Media Considerations

We are looking for:

- A combination of good drainage and water holding capacity (holds air and water)
- Weight- sometimes light weight is required sometimes we want the pot to be heavier



# Types of Media

**Soil from your garden-**  
heavy/potentially poor  
drainage/may contain pests





# Types of Media-Garden Soil

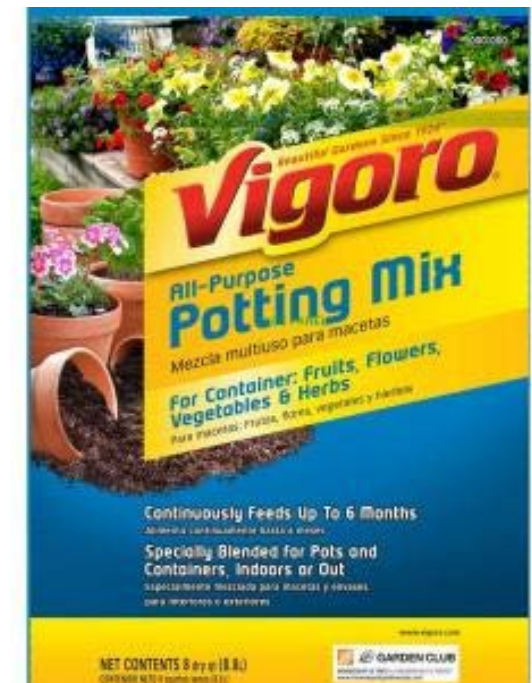


Hard to define differs from brand to brand but not normally not meant for containers due to drainage issues, compactability, salt levels, or high C:N ratio

# Types of Media-Potting Soil



420MAGAZINE.COM



Sphagnum peat moss mixed with perlite to improve aeration and oftentimes containing wood products



# Types of Media

## Home made mixes-

- Many recipes out there.
- Quality depends on how you mix them.

## Simple mix:

- 1/3 well rotted compost
- 1/3 Perlite
- 1/3 Sphagnum peat moss (or vermiculite, or coconut coir)





# Sphagnum Peat Moss/Perlite/Vermiculite



## S.P.M.

- High water holding capacity
- High nutrient holding capacity



## Perlite

- Improves aeration
- Holds little water or nutrients



## Vermiculite

- Hold significant amounts of water and nutrients



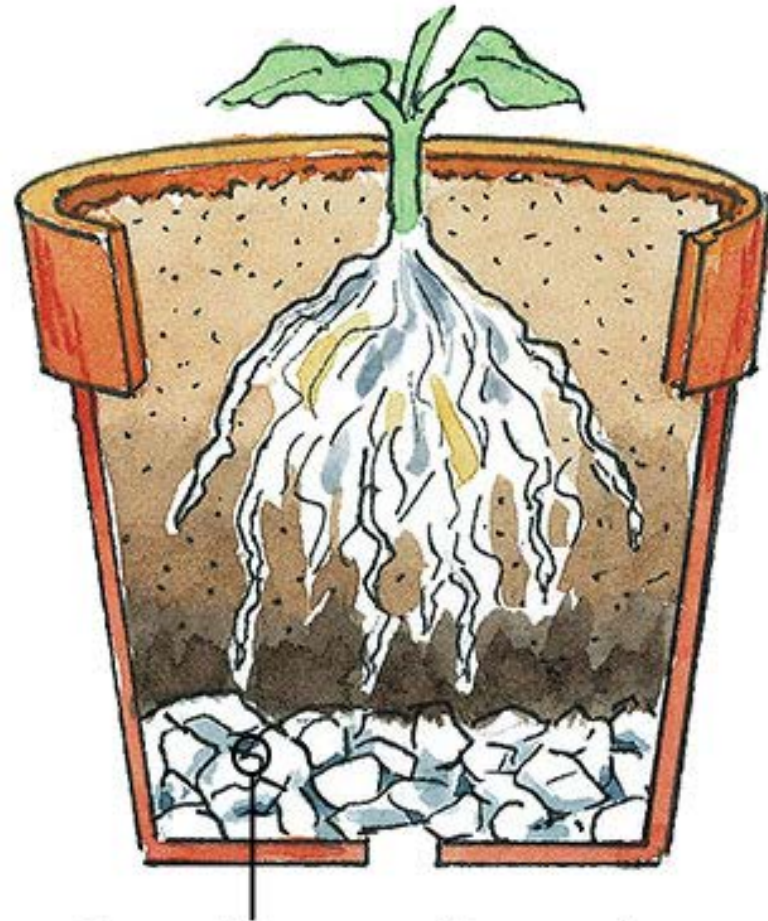
Should you add  
rocks to the  
bottom of your  
containers to  
improve drainage?

Nope.





The wettest soil is  
at the bottom.



Gravel moves the wet-  
test soil up in the pot,  
closer to the roots,  
which can lead to rot.



# Irrigation-Drainage



If pots appear to be losing media from the bottom you can use coffee fillers or similar material as a screen.

# What if I have a huge, deep container?

- You can add “filler” at the bottom of the pot (soda cans, plastic fruit trays, plastic pots from your plants, packing peanuts, etc.) to TAKE UP SPACE
- Ensure there is proper rooting depth for your plants



bees  
knees  
bungalow





# Fertilizer: Very Important

- Time release vs. water soluble
- Use a complete, balanced type
- If time release
  - Add to media before planting
  - Small amounts released at each watering
- If water soluble
  - Use every 2-3 weeks
  - Supplement time release with water soluble
- For heavy feeders, use BOTH

# Watering Tips



- Plants in containers generally need more frequent watering than plants in the ground
- Check moisture by weight—may need to “cycle and soak”



# Design Elements

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- “Thrill, Spill, Fill”
- *De gustibus non disputandum est*
- Make growing conditions suitable for the plants you want to grow, then go for it!







# Rule-Breakers







# Herbs – heavy container hitters!

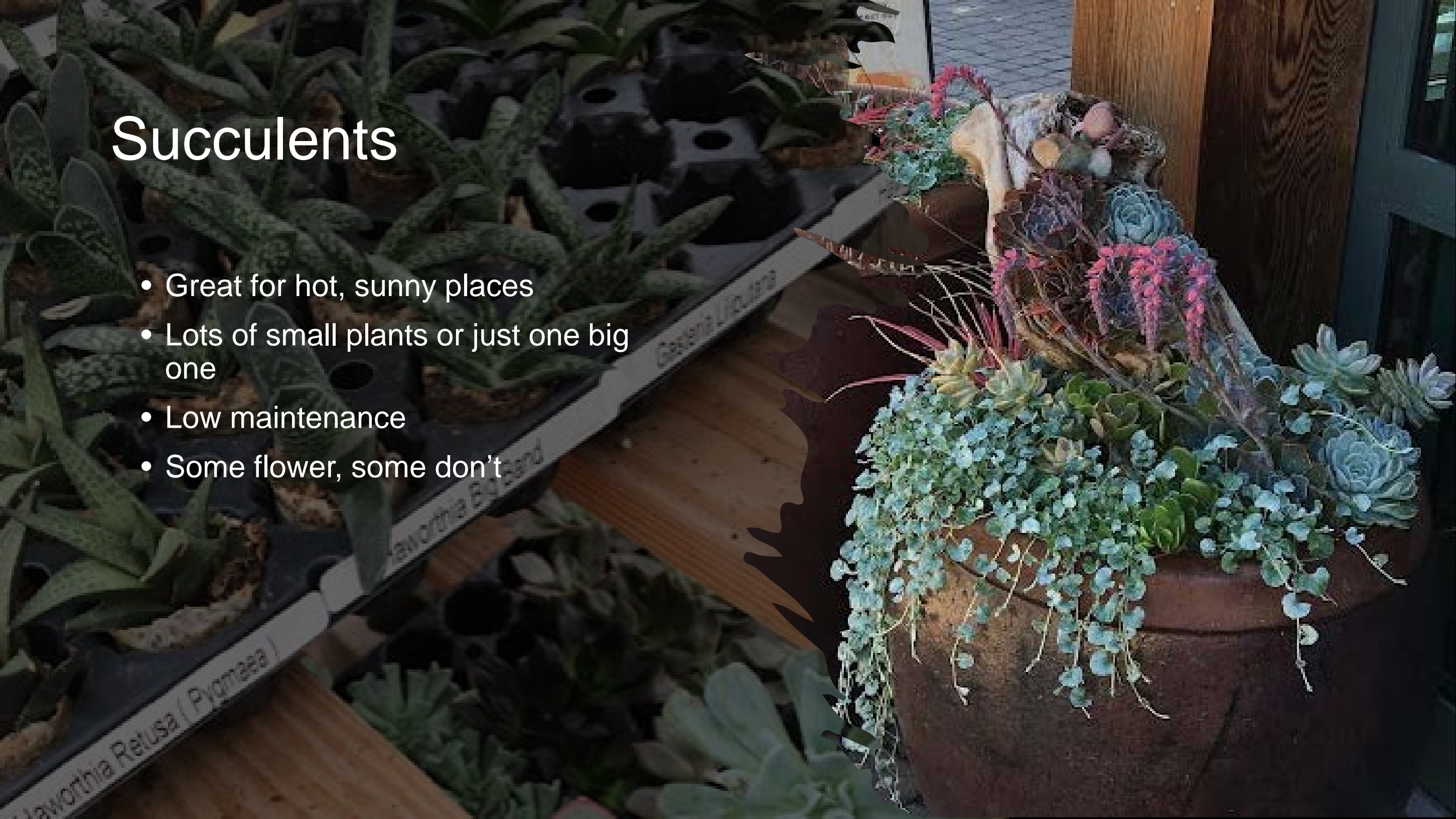


- Smell, Taste, Sight, Touch
- Just about any herb will grow well in a container, or in a mixed container.



# Succulents

- Great for hot, sunny places
- Lots of small plants or just one big one
- Low maintenance
- Some flower, some don't





# Texture

- Flowers are great
- But don't always bloom!
  
- Combine leaf sizes, shapes, texture, and color for dramatic combinations regardless of flowers













# Thank you

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