

Big Gardens in Small Spaces

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UPCOMING WEBINARS

Carbon Sequestration in the Landscape

Oct. 16, 12-1 (8 webinars)

PG&E and ReScape CA

Backyard Composting

Oct. 17, 9-10:30am

www.StopWaste.org

How to Grow a Winter Garden

Oct. 19, 6:30-7:45pm

Master Gardeners of CCC

<http://ccmg.ucanr.edu/>

Symphony of the Soil

Nov. 12, 2020 6pm-8pm

www.StopWaste.org

Native Plants in Your Naturehood

California Native Plant Society

Fall Campaign

www.cnps.org



BIG GARDENS IN SMALL SPACES: ADVENTURES IN CONTAINER GARDENING



Lori Caldwell

CompostGal:

Consulting, Landscaping and Education

Agenda

- Benefits of growing in containers
- Container Types
- Sunshine requirements
- Soil Fertility
- Great crops for containers
- Irrigation/watering/drainage
- Companion planting
- Pests
- Tips and tricks
- Q&A

Benefits

- ❑ Expand your in-ground garden capacity
- ❑ Grow fruits and veggies anywhere
- ❑ Move with the sun
- ❑ Lack of weeds
- ❑ No gophers!
- ❑ Don't have to deal with soil issues (*clay, sand, contaminated*)
- ❑ Able to control rapidly spreading plants
- ❑ Garden accessibility when you don't have a yard
- ❑ Grow indoors or outdoors

- Don't be afraid to plant crops closer together
- Just need to amend more often to compensate for the additional plants





What kind of container should I use?



Container Types

Plastic

- ❑ Will eventually break after exposure of the sun, but that takes awhile
- ❑ Holds water longer
- ❑ Cheaper
- ❑ Lightweight
- ❑ Wash any reuse plastic to kill any diseases/pests

Ceramic

- ❑ Breaks easily
- ❑ Unglazed versions dry quickly
- ❑ Can be costly
- ❑ Heavy
- ❑ Great for succulents or drought tolerant plants



Container Types

Wood

- ❑ Hold onto water longer
- ❑ Eventually it will break down
- ❑ Wine barrels have to stay full or wet in order to keep from shrinking

Metal

- ❑ Can get hot and dry out the soil quicker
- ❑ Come in large sizes
- ❑ Can be expensive



Container Types

- **Reuse Options**
 - 5 Gallon buckets
 - Plastic totes and barrels, etc (*food grade plastics*)
 - Coffee cans (*plastic and metal*)
 - Burlap (*1 season max*)



Container Types



Container Types



- Planting directly into bags of soil
- Hanging baskets (*DIY or purchase*)



Container Types



- **Untreated pallets**
 - ▣ Be sure to check to see that they are marked with **HT** (Heat treated), these are safest to use
 - ▣ Be sure to give them a good washing before use to remove residue from previous use

Container Types

- ▣ **Untreated pallets**
 - ▣ Can be used horizontal or vertical
 - ▣ Dismantle and make into raised beds or containers
 - ▣ Can also be hung



Sunshine Recommendations

- Leafy vegetables need a minimum 4 hours
- Fruiting veggies need a minimum of 6 hours
- Shade loving edibles need a minimum 2-3 hours
- There are exceptions for lack of sunlight:
 - ▣ Is your garden surrounded by a wooden or rock fence?
 - ▣ Is there a lot of hardscape in your yard?: patios, pavers

Soil Type for Container Gardening

- Use potting soil ONLY for container gardening
 - ▣ Contain drainage materials
 - ▣ Lighter than garden soils
- When filling containers, be sure to leave 1 inch or more gap below the lip of the container
- I always mix my potting soil with compost before placing in pot
- Since new planting soil is fluffy, it can quickly drain from your pot. Rocks, pottery shards or basket coffee filters work great to keep the soil in while it's settling

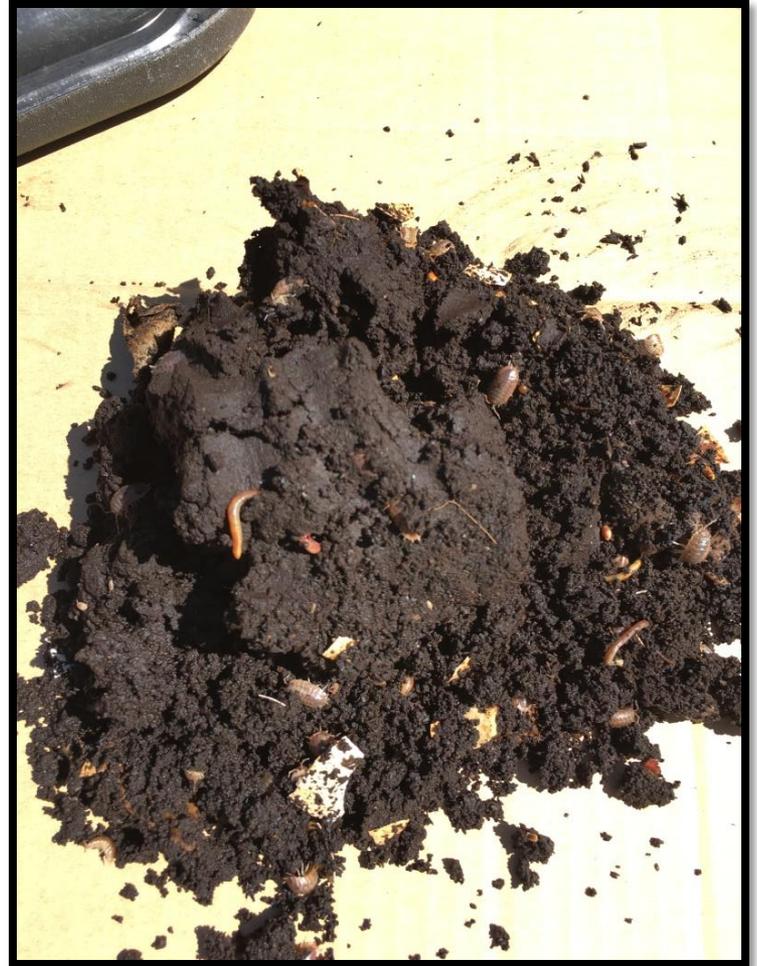


Q&A



Soil Fertility

- ❑ So **IMPORTANT** for container gardening
- ❑ Nutrition is limited to what is in the container
- ❑ Feed often depending on the plant type or what the plant “feeds on”



Soil Fertility

N-P-K



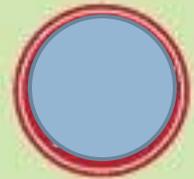
NITROGEN
for green foliage.



PHOSPHOROUS
for roots & blooms.



POTASSIUM
for overall plant health.



Maintaining Soil Fertility

- **Top dressing-** adding soil amendments prior to planting (*1-2 inches depending on size of container*)
- **Side dressing-** adding soil amendments around existing plants
 - ▣ Add during flowering and fruiting times
 - ▣ Heavy feeders need more nutrition more often
 - ▣ Liquid applications work great at this stage

Soil Amendments

- COMPOST- 1:1:1
- ALFALFA MEAL-3:1:3
- BONE MEAL-3:20:0
- FISH EMULSION-4:1:1



Soil Amendments

Building Soil with items you may already have at home

- ▣ **Coffee grounds**-high in acidity and nitrogen
- ▣ **Epsom Salts**-*Magnesium Sulfate*-good for nightshade plants
- ▣ **Calcium**-*crushed egg shells*-adds rigidity to annual stems
- ▣ **Potassium**-*dried and ground banana peels*



Epsom Salt

Natural Magnesium Sulfate

- A soaking aid for minor sprains & bruises
- Nourishes sore muscles
- Use as a saline laxative
- Great for gardening, use as a plant nutrient

ALL NATURAL

The Importance of Healthy Soil

- ❑ Increases the water holding capability in the soil
- ❑ Keeps the temp and moisture levels at a good balance
- ❑ Helps prevent pests and diseases
- ❑ Increases yields



Great Crops for Containers



- Perennials
 - Tree Collards
 - Dwarf fruit trees
 - Strawberries
(especially in hanging baskets)
 - Blackberries
 - Artichoke

Great Crops for Containers



Great Crops for Containers



- Most annual veggies (except for corn)
- Herbs (annual & perennial)
 - ▣ Culinary
 - ▣ Medicinal
- Edible flowers

Irrigation/Watering/Drainage

- Saucers for smaller pots during the summer
 - ▣ You are able to capture the water if it drains too quickly
- Water in the morning or late evening
 - ▣ Be sure to water the soil and not the leaves (if possible)
- Hand watering works great for containers
- Straw mulch (for annuals) and coarse mulch (for perennials) will hold water longer and keep weeds at bay

Irrigation/Watering/Drainage



- During the rainy season raise your containers off the ground
- Sometimes a “suction” can form on grass, mud or cement blocking drainage holes

Irrigation/Watering/Drainage



- Moisture meter use before you water your containers
- This has been a game changer for me!!
- Best practice is to check the soil with a meter probe or a finger to see if the plant needs to be watered at all.

Companion Planting

Growing certain plants near each other for mutual benefit or to help control pests

Example: Carrots ♥ Tomatoes

- They don't compete for resources
 - ▣ Carrots prefer the shade
 - ▣ Tomatoes are sun lovers

Example: Tomatoes & Basil

- ▣ Tasty together on a plate
- ▣ Basil helps repel pests from tomatoes

Pests



Pests



- Typical pests you may encounter
 - Aphids (*seen here with ladybeetles*)
 - Cabbage worm
 - Snail/slug
 - Tomato Hornworm
 - Whitefly

TIPS

- Be sure to include flowering plants to attract beneficial insects and pollinators
- If the plants are drought tolerant, plant on mounds or plant in terracotta to increase drainage



TIPS

- Let some of your plants go to seed at the end of the season (*or when/if they bolt*)
 - ▣ Attract pollinators, birds and beneficial insects
 - ▣ Great opportunity to save seeds



Mulch and Compost Coupons

- Provided by local nurseries
- Coupons for bulk or bags
- www.ebmud.com/mulch



Mulch

A gardener's best friend



Landscape Rebates

Residential

Up to \$2,000

**Commercial &
Multi-family**

(5 or more units)

Up to \$15,000

www.ebmud.com/watersmart

In Summary

- Grow stuff!! – many benefits to container gardening
- Choose your container
- Amend often to keep up soil fertility and help keep plants healthy
- Container plants i.e. tree collards, dwarf fruit trees, annual veggies and herbs
- Monitor moisture
- Make sure to include plants that attract pollinators and beneficial insects

Thank You!!!

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