



UCCE Master Gardeners of El Dorado County Presents



Develop a Vegetable Garden in a Small Backyard Setting

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UCCE Master Gardener
of El Dorado County

University of California
Agriculture and Natural Resources
California Master Gardener
Cooperative Extension
El Dorado County



Housekeeping

- Welcome
- EDC Master Gardeners, are volunteers trained by the University of California (90 hours training).
- **The Master Gardener goal:** educate our community about research-based horticulture.
- Sign in, Handout, Upcoming Class Schedule & Evaluation Form.
- Publications for sale.
- Our timetable/break/restrooms.
- Donations (help fund Sherwood Demonstration Garden).

Class Objectives

Review your available space.

Plan and develop your garden.

Review planting options.

Maximize harvest.

Integrating edibles into your landscape.

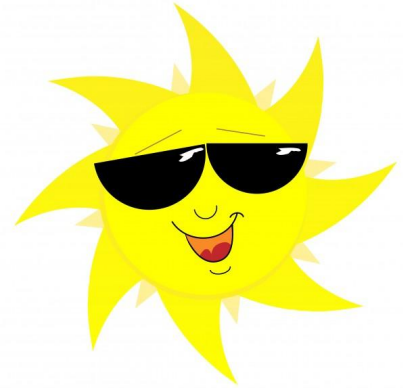
Topics For Today

1. Site Selection
2. Design Alternatives
3. Site Preparation
4. Planting
5. Maintenance

Questions



1. Site Selection



Location Location Location!!!

East to West Best Exposure

6 to 8 Hours of Sun

Easy Accessibility to hose outlet, tools, etc.

Close Proximity to your house

2. Design Alternatives

Set a Budget

- How much do you want to spend?

In Ground

Garden Box

- Wood, brick, sandbags
- Beds 3' wide 1' deep



Straw Bale

- Joel Karsten
- bale conditioning 2 weeks



Integrate with Landscape



2. Design Alternatives (Cont'd)

Containers:

- Light color pot best
- Clay, plastic, fiber, ceramic
- Must have drain holes
- Sizes:

Cucumber – 24” pot

Peppers – 18” pot

Tomatoes – Dtr (18” pot) Indtr (24” pot)

Zucchini – 24” pot

Eggplant – 18” pot

Manual

Biohacks

Road-Ready Garden

by
MARY BETH
GRIGGS

THERE'S NOTHING QUITE like putting down roots and tending a garden. But what happens if you don't have a backyard? Or you're suddenly uprooted? Or you decide to go on a road trip and can't get anyone to watch your plants?

Just whip up a portable container garden. Sure, it's not the same thing as a plot of land, but it's easy to build and you can move it on demand. In this design, created by researchers at the University of Maryland Extension, a water reservoir helps keep the plants healthy and hydrated—even if you forget to water them while you're traveling.

TIME 2 hours

COST \$50

DIFFICULTY ●●●●●



+TOOLS & MATERIALS

- Two five-gallon food-grade buckets (A)
- Drill with $\frac{1}{2}$ -inch hole saw and $\frac{3}{16}$ -inch bit
- Sandpaper
- Cloth or nylon strips (B)
- PVC pipe, $\frac{3}{4}$ -to 1-inch wide, 18 inches long (C)
- Saw
- 1½ quarts of soil (D)
- Seedlings or plants (E)

+INSTRUCTIONS

- 1/ Trace the mouth of the pipe on the bottom of one bucket, less than an inch from the edge. Drill and sand out that circle.
- 2/ Drill five additional $\frac{1}{2}$ -inch holes: one in the center and four evenly spaced around the edge. For drainage, add eight smaller holes spread around the bottom.
- 3/ Tie a knot at one end of each cloth strip. Feed the strips through the $\frac{1}{2}$ -inch holes so the knots sit on the inside and the cloth hangs down.
- 4/ Put the holey bucket into the second one, mark a spot on the outer bucket where the holey base hits, and separate them. Drill a small overflow hole at the mark and restack the buckets.
- 5/ Cut one end of the pipe at a 45-degree angle. Push that end through the pipe-size hole in the inner bucket.
- 6/ Fill the inner bucket with damp soil and plants, and keep them hydrated by pouring water down the pipe. Stop adding water when the overflow hole starts to leak.





Vegetable Growing in Small Space

Consider this:
The containers in this garden would take up less than 75 square feet of patio, deck or balcony space. We positioned the containers on a 6 by 20 foot balcony this way:

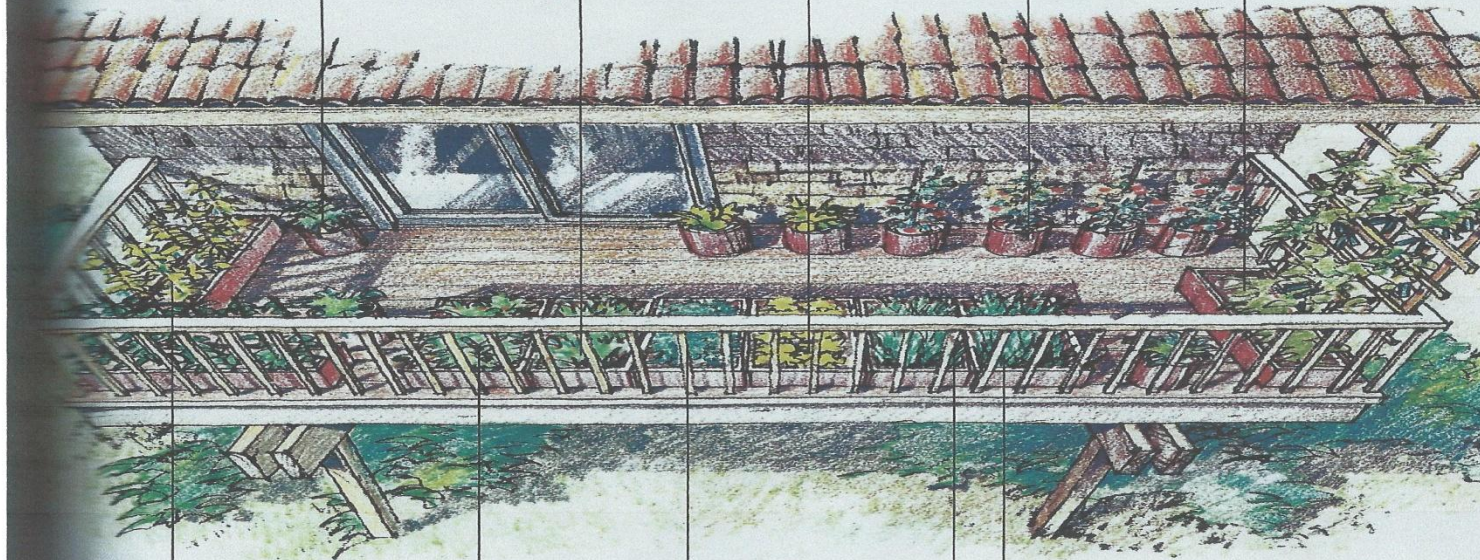
Three 4 gallon size bell pepper plants produce 15 to 25 bell peppers.

72 beets plus beet greens

Swiss chard—
15 to 25 pickings

Four 5 gallon tomato plants can produce 80 to 100 medium-sized tomatoes.

Cucumbers: 4 plants trained on a trellis will produce about 120 cucumbers.



Two boxes of pole snap beans; twelve plants should produce 12 pounds of beans.

One plant of zucchini can produce 40 or more zucchini (5 per week for about 8 weeks).

24 turnips and 20 kohlrabi

82 carrots

72 green onions





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3. Site Preparation

Drainage

- Dig hole, fill with water, wait ½ hour

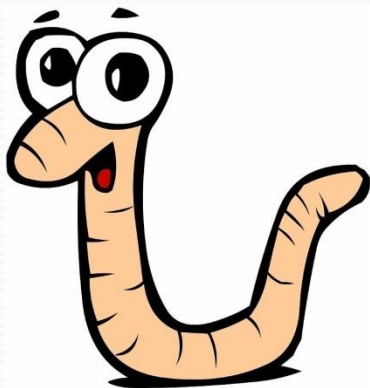
Soil Condition

- Clay, loam, sandy
- pH 5.5 - 7
- Soil test, lab or kit



Planting Mix

- Prepackaged or bulk
- 1/3 peat moss, 1/3 compost, 1/3 vermiculite
- L x W x H = Cu. Ft.
- Cu. Ft. / 27 = Cu. Yards



3. Site Preparation (Cont'd)

Amendments

- Compost
- Decomposed leaves

Fertilization

- Avoid heavy nitrogen
- Manure let stand for 2-3 weeks before planting

Watering Options

- Water by hose, bucket
- Wand - 5 gallons per min. depending on water pressure
- Drip, soaker hose







4. Planting

Last Freeze Date?

- Planting guide
- EDH April 15



Provide Protection from Cold

- Row covers, walls of water

Plant Selection

- What do you want to grow?
- MG Plant Sale – April 15

Perennial vs Annual Plants

- Berries, artichoke, asparagus
- Lettuce, tomatoes, etc.

4. Planting (cont'd)

Start from Seed or Buy Plants?

- Seed requires time and patience
- Space for nursery
- Buy good quality plants



Microgreens

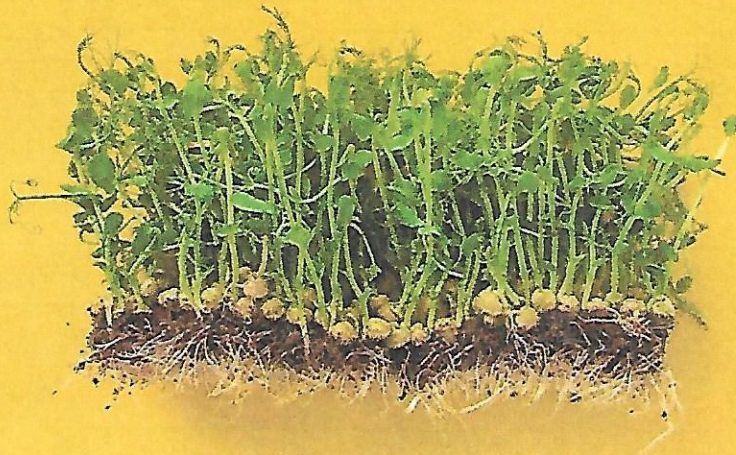
- Fastest crop you will grow
- Grown indoors
- Harvest leaves within weeks
- Harvest leaves when 1 to 1 ½ inches tall
- Grown year round
- Vegetables, herbs and flowers
- Harvest with scissors just above soil

Grow Your Own Microgreens

MICROGREENS MAY BE TINY, but they pack a big nutritional punch. These seedlings of edible plants come in a variety of types, such as broccoli and arugula, and can typically be found in the produce sections of food stores. They are also easy and fast to grow yourself (just search online for "grow microgreens at home").

Microgreens, baby plants in a rapid

growth phase, "can provide 20 to 30 times more nutrients," like iron, magnesium, potassium, and zinc, than mature plants, says Rachel Cheatham, PhD. The flavor of microgreens is also highly concentrated, making them better as an accent than a meal. Toss a handful into a salad or use as a garnish on soup or pasta.













4. Planting (cont'd)

Maximize Food Production

- Bush type varieties
- Vegetables that produce multiple crops



Plan Placement According to Height

- Taller plants on north side

Layout Watering System at Planting Time



4. Planting (cont'd)



Tomato

Solanum lycopersicum

30 Seeds Lot: 17-535-T

Patio Choice Yellow Hybrid

Yellow, Cherry-type, Determinate, 50-60 days

PLANTING INSTRUCTIONS

Seed Starting: Start seed indoors 5-7 weeks prior to last frost

- **Germination:** 7-21 days with soil temp. of 77-86°F
- **Depth:** 1/16 to 1/4"
- **Medium:** Sterile starting mix without fertilizer
- **Recommendation:** Use bottom heat to maintain soil temp.

Transplant: to larger pot when there are 2 sets of true leaves

Planting Out: Harden off prior to setting outdoors

- **Spacing:** 24" apart if staked
- **Recommendations:**
 - Use a 4-6-8 ratio fertilizer
 - Apply mulch to preserve moisture
 - Prevent soil contact with fruit
 - Avoid watering late in the day



TOTALLY TOMATOES

334 West Stroud St.

Randolph, WI 53956

2017 AAS Award Winner

Described as an 18" determinant plant that produces 100 tomatoes per plant.

2017

3 plants: 24", 32" and 52" tall. Combined pick 2,548 tomatoes.

2018

3 plants: All 36" tall. Combined pick 1,431 tomatoes.

2019

2 plants: Both 36" tall. Combined pick 1,150 tomatoes.

2020

1 plant: 32" picked 1,108 tomatoes.

2021

2 plants: Both 36" tall.

Combined pick 1,513 tomatoes.

2022

1 plant: 36" tall, picked 309 tomatoes



ITEM # 756-00

TOMATO SILETZ

PACKET OF 20 SEEDS. LOT # 7.

GUARANTEED GERMINATION 80% OR HIGHER.
SEE INVOICE FOR MORE GERMINATION DATA.

2020



571 Whaley Pond Road

P.O. Box 1

Graniteville, SC 29829

FIND OUR CULTURE AND WARRANTY ON REVERSE









ITEM #807-00
HYBRID TOMATO SUGAR RUSH
PACKET OF 10 - 15 SEEDS. LOT #11
GUARANTEED GERMINATION 75% OR HIGHER.
Packed for 2023



2004 Westside Drive • PO Box 1777
Augusta, GA 30907

FIND OUR CULTURE AND WARRANTY ON REVERSE









'Peas 'N' Pod Bernard' pea

stalks, a second harvest will appear in just a few more weeks. With successive sowings, you can keep this nutritious superfood on your table for months.

For small-space gardens, Pure Line Seeds has developed a pea vine (*Pisum sativum*) that does well in containers and raised beds. **'Peas 'N' Pod Bernard'** grows to 12–18 inches with afile-type vines, meaning that the leaves stick together and when closely planted can form a neat hedge. With 10 to 12 pods and over 100 peas per plant, this small, disease-resistant plant can really produce—and in just 69 days from seed to harvest.





4. Planting (cont'd)



Provide Support, Cages, etc.

- Construction wire cages, 6" hole spacing, 24" in diameter
- Cukes, squash & melons grown vertically to save space

Square Foot Garden

- Mel Bartholomew
- Intensive gardening method

Keep a Detailed Planting Journal

- What worked, what didn't
- What was planted where



Watering Schedules:

Front Yard: S M W F

Backyard: S M W F

Backyard Lawn: M W F Run time 8 minutes per cycle two cycles.

2023 Garden Production:

Zuke's 3 plants = 84

Potatoes (Yukon Gold) = 5 plants yielded 15 pounds, largest potato 11 oz.

Tomatoes:

Patio Red 1 plant = 43

Sugar Rush (red small) 2 plant = 1445

Siletz (red) 2 plants = 107

Apricots: no output this year.

Yellow Patio Tomato did not make ot this year.

Nectarines: no output this year.

London trip. Started all veggies late. Seeds in early May.

Grew onions in the shade box. Did okay. Plant them farther away from water source. Onions doing good. Boxes are staying moist with watering 4 days a week.

Doing a sugar rush espalier this year, so far so good. Plant is 12' wide and 5 ' tall.

Lawn just now starting to show signs of recovery. Next year start watering while grass is still green. Tried 3 days per week 8 minutes per cycle, two cycles.

Zoysia grass update. Last year's plugs doing well. Filling in nicely. Takes about 3 years for fill-in.

Dug up the hummingbird flowers, gave some away and planted about 20 in the hummingbird garden. They did really well, looking forward to next year.

Bluebirds: 5th year. 5 eggs in nest box. All five hatched and fledged. Additional 5 eggs, all hatched and fledged. Good year. Last 6 years nurtured 24 new bluebirds. Put up bird house in 2018.









Lepotageurbain.com

5. Maintenance

Check Irrigation System Regularly

- Buy pressure compensating drips
- Drips will sometimes stop
- Animals like to chew on hoses



Keep Weeds Out

- Uses plant food and water

Mulch Plants

- Keeps soil cool and moist
- Keeps weeds from germinating
- 3" grass, straw or etc.
- Keep 6" from plant trunk



5. Maintenance



Protect Plants from Wildlife

- Bird Netting
- Plant Sunflowers nearby to keep the Goldfinches from eating your plant leaves
- Use hardware cloth, screen or barrier on bottom of garden boxes to keep out voles or other small animals





An Old Chinese Proverb:

If you wish to be happy for a few hours, drink wine until your head spins pleasantly;

If you wish to be happy for a few days, get married and hide away;

If you wish to be happy for a week, roast a pig and have a feast;

If you wish to be happy all your life, become a **gardener**.



Follow up Survey

The Master Gardener's will be requesting your email address to allow the UCCE to send you a survey (usually two months after the class) that when completed will provide us with feedback on your success in implementing the information from this class.

References

University of California, California Master Gardener Handbook, Chapter 14.

American Horticultural Society Illustrated Encyclopedia of Gardening, Gardening In Small Spaces, pages 29 and 107. (Slides 9 and 10).

UCCE Master Gardeners of El Dorado County

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Website: ucanr.edu/sites/EDC_Master_Gardeners

Interested in becoming a Master Gardener?

Complete the Master Gardener Training Interest
Online Form (on our website).

Thank You !



Any Questions ?

