

Spring Container Vegetable Gardening



UCCE Stanislaus County Master Gardeners



Photo: allamericaselections.org

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Let's take a poll!!!

- Tell me about you!



Photo: Heidi Aufdermaur



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Who are the Master Gardeners?

- Volunteers who teach in the community.
- Can answer gardening and pest management questions!
- Visit <https://ucanr.edu/sites/stancountymg/> to see upcoming classes, read our blog, or learn more about the program.
- Sign up for our newsletter blog!



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Sun and Water Source

- 6-8 hours sunlight for most plants
 - Leafy, root vegetables 4-6 hours ok
- Have a nearby water source
 - Use drip or soaker hose irrigation



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Watering



- Make sure seeds, seedlings, and transplants get enough water.
- Keep soil moist, including the root ball!
- **Water regularly.**
 - Sporadic watering can cause problems for the plant.

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Fertilizing

- Use a **slow or time-release fertilizer.** OR
- Water soluble fertilizer.
- Follow directions
 - Never add more fertilizer than the directions state, as this can “burn” your plants.
 - Water seedlings at ½ strength after 2 weeks.



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Soil Preparation

- Add 4-6" of compost to your garden and mix in
- Containers: use good-quality potting mix
 - Avoid using outdoor soil which may contain
 - Weed seeds, diseases, or other pests
 - Garden soil can make containers heavy and hard to move



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Container Gardening

- Clay, plastic, metal, wood, etc., all work well.
- **Drill holes if missing.**
- Large containers are best.
- Choose light colored containers to help reflect heat.



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Container Concerns

- Heavy containers.
 - Use a pot trolley underneath.
- Pots may stain your porch or patio.
 - Use saucers underneath.
- Empty saucers.
 - Don't allow container to sit in water.
 - Sitting water could become a mosquito pond!

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Creative Containers

- Wagons or wheelbarrows
- Kitty litter bins
- 5-gallon buckets
- Rubber maid tubs
- Kiddie pools
- Milk jugs (1 gallon)
- Anything else you can think to use!



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Watering & Containers

- Containers may dry out quicker than mulched plants in the ground.
- Test moisture with your finger to a few inches deep, water as needed.
- During warm weather, daily water may be needed or even 2x a day depending on temperature and container size.

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Questions?



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Planting Methods

- Transplants (4-6 weeks old)
 - Recommended for beginning gardeners
 - Preferred choice for certain vegetables
- Seeds



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What is a transplant?

- A plant that is 6 weeks old or older.
- A plant that can quickly help you establish your garden.
- Many fall garden transplants are available.
 - Use seeds is the most inexpensive choice.
 - Sometimes transplants are easier for new gardeners to establish rather than seeds.



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Planting Transplants

- Take plant out of container and examine "root ball."
- Pull apart circling, overgrown roots.
- Make a hole the same size of root ball.
- Set plant into hole.
- Fill in around root ball gently.
- Water well, is the root ball saturated?



photo: mantis.com



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Label what you plant!

- Purchase labels
- Repurpose mini blinds
- Popsicle sticks
- Paint sticks
- Milk carton strips
- Use a permanent marker



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Seed Packet Instructions

SEEDS
Now you can grow a complete salad mix all in the same row. This Spicy Salad Mix is a custom blend of green and red lettuces with spicy greens like Arugula and Curly Cress. Succulent baby leaves can be cut every few weeks for a table-ready treat.

PLANTING
Lettuce prefers cool weather. Select a location with full sun or partial shade in hot areas. Sow in early spring, or fall/winter in mild climates. Keep soil evenly moist for best growth. Thin regularly - lettuce does not like to be crowded.

NOTE
For "cut and come again" harvest, cut young leaves 1/2" from the ground. Cut several times each

SEED DEPTH
1/8" (3mm)

PLANT SPACE
12" (30cm)

ROW SPACE
15" (38cm)

SPROUTS IN
7-14 days

MATURES IN
45-70 days

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Why didn't my seeds come up?

- You might have buried them too deeply.
- You didn't water them consistently to keep soil moist.
- The seeds expired (past date).



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What is thinning?

- 3 weeks after plants sprout, choosing which seedlings to keep, and which to remove.
- Removing some seedlings so plants have enough space.
- Necessary practice that can be DIFFICULT to undertake.
 - Why? We want to keep ALL the seedlings!



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Thinning



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Questions?



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What should you grow?

- Foods you and your family like.
- Enough, but not too much.
- Kids (and adults) might need to try something more than 10 times to decide if they like it.






photo: abbotnutrition.com

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Vegetables that grow well in containers



- Salad greens, spinach, Swiss chard
- Eggplant, peppers, determinate tomatoes
- Beets, radish, carrots
- Bush beans, bush varieties of cucumbers and squash
- Mini pumpkins
- Many herbs!

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Vegetable Planting Guide

▼ preferred time to seed in a greenhouse or other protected area (e.g. coldframe, well lit window)
● preferred time to transplant
■ preferred time to direct seed
 seeding
 transplanting

Seeding and transplanting dates may vary between varieties. Please check seed package or nursery for additional information.
Weather can modify planting and harvesting dates.

Information provided by Robert Norris, Department of Plant Sciences, 2008

	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
broccoli													
cabbage													
parsnips													
cauliflower & brussels													
carrots													
rutabaga													
brinjal													

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On your patio or balcony:

- **Most vegetable plants need 6-8 hours sunlight**
- Leafy, root vegetables can take 4-6 hours of sunlight.



photo: harvesttotable.com

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Minimum Container Size

- Pot that holds at least 2 gallons:
 - Beets, cucumber, radishes, cherry tomatoes, green beans
- Pot that holds at least 5 gallons:
 - Tomatoes, squash, eggplant, mini pumpkins



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Creative Containers

- Kitty litter bins
- 5-gallon buckets
- Rubber maid tubs
- Kiddie pools
- Milk jugs (1 gallon)
- Wagons or wheelbarrows
- What other items could you “upcycle” or use for another purpose?



photo: thriftyfun.com

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Wine barrels, wooden boxes, palettes, etc.



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Potting Mix

- Use a good-quality potting mix from a nursery or garden center
- Avoid using outdoor soil which may contain
 - Weed seeds, diseases, or other pests
 - Soil can make containers heavy and hard to move



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Seeds vs. Transplants

- Seeds
 - Root vegetables are best from seed since they don't transplant well
 - Leafy vegetables, squash, cucumber are easy to grow from seed
- Transplant
 - Tomatoes, peppers, and eggplant may be best from a transplant

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Let's Read a Seed Packet

Gold Rush Hybrid SQUASH
Non-tender green

Early maturing, golden-yellow fruits are produced all season on compact, vigorous vines. A wonderful melon to eat, great for pickling. Great for cooking and freezing.

SEED DEPTH
1" (3cm)

PLANT SPACE
24" (61cm)

ROW SPACE
60" (1.5m)

SPROUTS IN
7-10 days

MATURES IN
60 days

SEED COUNT
approx. 25

PLANTING
Plant in a full sun location with full sun in afternoon. Sow seeds 1 inch deep. Start fruit in about three weeks after last frost. For transplant, squash germinates poorly in cool soils. Feed monthly with an all-purpose fertilizer or compost, or vermicast.

HARVEST
Harvest fruits regularly for sustained production and best flavor. Early flowers are usually female and will not set fruit until male flowers with long stems open.

Packed for 2017 Sell by 12/17 Lot B
 New GMO - Untreated Seed
 5717 Arapahoe Boulder, CO 80503

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Seed Life Expectancy

One Year	Two Years	Three Years	Four Years	Five Years
Chives	Annual Flowers	Amaranth	Beet	Artichoke
Marjoram	Cilantro	Lima Beans	Broccoli	Basil
Onion	Leek	Carrot	Brussels Sprout	Cucumber
Oregano	Okra	Celery	Cabbage	Dill
Parsley	Mizuna	Chinese Cabbage	Cauliflower	Endive
Parsnip	Most Wildflowers	Fennel	Eggplant	Greens
Salsify	Peppers	Kohlrabi	Kale	Lettuce
	Sage	Pea	Pumpkin	Meat
	Sweet Corn	Perennial Flowers	Radish	
		Snap Bean	Rutabaga	
		Spinach	Squash	
		Tomatillo	Swiss Chard	
			Tomato	
			Turnip	
			Watermelon	

Properly stored

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What is a seed?

- Tiny living embryos covered by a protective seed coat
- Some are more protected than others
- Have small amount of food reserve
- Germinate when soil temperature is right, and when kept moist

photo: deltatotechnology.com

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The Sprouted Seed

- Root hairs
 - Fine & fibrous
 - Responsible for water & mineral uptake
 - Fragile! Keep moist





photo: University of Central Arkansas



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Why didn't my seeds come up?

- You might have buried them too deeply.
- You didn't water them consistently to keep soil moist.
- The seeds expired (past date).



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"Easy" to grow seeds

- Vegetables with large seeds
 - Plant 2-3 per container
 - Plant at the correct depth and space apart
 - After 3 weeks, thin to one strong plant
 - Squash, peas, cucumber, bean, mini pumpkin




photo: edenbros.com photo: pixabay.com photo: nuts.com

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Tricky to Grow...

- Vegetables with tiny seeds can be difficult to start for new gardeners.
- What does 1/8 of an inch look like?
- Sprinkle seeds on top of soil, then add a small handful of soil.



photo: savoryspiceshop.com

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Labeling

- Purchased labels
- Repurposed mini blinds
- Popsicle sticks
- Paint sticks
- Milk carton strips
- Use a permanent marker
- Write the date!



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What is thinning?

- 3 weeks after plants sprout, choosing which seedlings to keep, and which to remove.
- Removing some seedlings so plants have enough space.
- Necessary practice that can be DIFFICULT to undertake.
 - Why? We want to keep ALL the seedlings!



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How to thin

- Review plant spacing needs on the seed packet.
- Remove unneeded seedlings by carefully pinching the top of the unwanted plant or cutting it at the base with scissors.
- You can add the tiny sprouts to a salad or sandwich!



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Transplants

- A plant that is 6 weeks old or older.
- A plant that can quickly help you establish your garden.
- **Tomato, pepper, and eggplant** transplants are easier for new gardeners to establish rather than seeds.



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Planting Transplants

- Take plant out of container and examine "root ball."
- Pull apart circling, overgrown roots.
- Make a hole the same size of root ball.
- Set plant into hole.
- Fill in around root ball gently.
- Water well, is the root ball saturated?



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Root Vegetables

- Radishes, beets
 - Should not be purchased as transplants.
- Thin seedlings after 3 weeks to correct spacing, otherwise, you will have teeny root veggies!



Photo: pixabay.com

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Harvest & Storage Radishes, Beets

- Harvest when ready to eat.
- Can be left in container for a little while until you are ready.
- Store in refrigerator.



photo: pixabay.com

photo: needpixa.com

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Radishes

- Use 4-6" deep container.
- Any variety will work.
- Plant seeds in spring, summer, or fall.
- Sprinkle seeds in a row, cover lightly & water.
- Seeds germinate in just a few days!
- Thin after 3 weeks.
- For continuous crop, plant multiple containers 2-3 weeks apart.



photo: balconygardenweb.com

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“Fruit” Vegetables

- Many vegetables are the pollinated “fruit” of a plant.
- #Trivia?
- These include squash, pumpkins, cucumbers.
- Flowers need pollinators (bees and other insects) to produce “fruit.”



photo:usda.org



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About Tomatoes

Check the tag!



photo: pixabay.com

- Indeterminate types get very large, most containers can't support them.
- **Determinate are best for containers, try:**
 - ‘Celebrity,’ ‘Roma,’ ‘Bush Early Girl,’ ‘Marglobe.’
 - Tomatoes with the word “patio” or “pixie” in the title.

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Planting Tomatoes



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Harvest those Tomatoes

- When the "fruit" looks the right color and gives slightly when gently pressed you are ready to pick. Use gardening clippers or scissors to remove from plant. If possible, please do not store in refrigerator . Eat and enjoy!



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Summer Squash

- Pot should be at least 24" wide and 16-18" deep.
- Varieties:
 - Bush/compact varieties
 - Vining: need a small trellis
- Keep your eyes peeled for squash bees that visit the flowers!



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Eggplant

- Use 5-gallon container.
- All varieties thrive in containers.
- Plant doesn't need support.
- Harvest with pruning shears.
- Store on counter until ready for use.
- If necessary, store in refrigerator for up to 3 days and use immediately after removal.



photo:bosque.agrilife.org

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Beans

- 2-gallon size pot per plant.
- Provide support for climbing (pole) beans.
- Harvest by gently snapping bean pods off plant.
- Store in refrigerator.



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Cucumbers

- Plant at least 3 plants for pollination.
- 2-gallon size pot minimum per plant.
- 'Spacemaster,' 'Bush Crop,' Bush Champion,' 'Patio Pickle' save space.
- Bush cucumbers won't need support.



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Peppers

- 5-gallon bucket is best, or containers at least 16" deep and 12" wide.
- Chile, bell, and banana peppers do well in containers.
- Large pepper plants can benefit from a cage to hold them up.



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Plant Support

- Choose bush varieties
- Some crops have a vining form & need a trellis.
 - Beans, cucumbers, mini pumpkins, squash



photo: garden-gadget.com



Photo: gardenofsteph.com

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Watering new plantings



- Make sure seeds, seedlings, and transplants get enough water.
- Keep soil moist, including the root ball!
- **Water regularly.**
 - Sporadic watering can cause problems for the plant.

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Watering established containers

- Container mix can dry out quickly from sun and wind.
- Test moisture with your finger to a few inches to see if mix is dry, water as needed
- As weather warms, you may need to water daily or even 2x a day depending on temperature and size of container.



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Roots can't swim!

- Be careful of overwatering in the beginning.
- Overwatered plants may show symptoms that resemble drought.
- What do plant roots need besides water?



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Fertilizing

- Use a slow or time-release fertilizer (pellets)
- OR
- Water soluble fertilizer
 - 10-10-10, 13-13-13, or 14-14-14
 - Follow directions according to the size of your container.
 - Never add more fertilizer than the directions state, as this can “burn” your plants.



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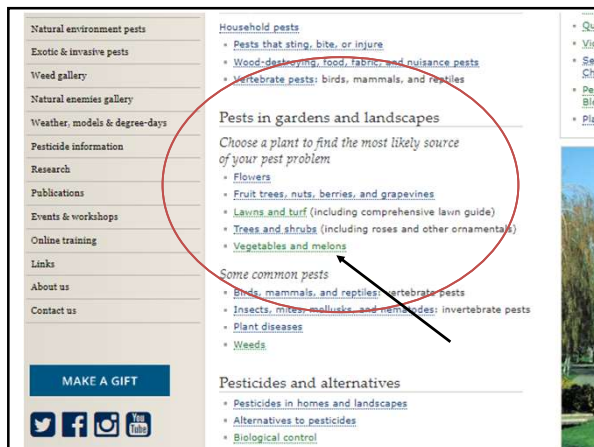
Got Pests?



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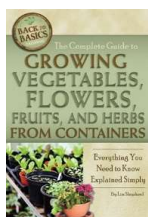
Books Available on Hoopla



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The Complete Guide to Growing Vegetables, Flowers, Fruits, and Herbs from Containers

By Lizz Shepherd



This book lists the necessary steps and resources needed to grow plants in containers. You'll learn about how vegetables, flowers, and herbs.

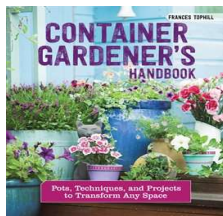
The basics of container planting, including the best single plant containers, two, three, and four plant combinations are provided to help you decide how to lay out your container garden.

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Container Gardener's Handbook

by Frances Tophill

With over 40 projects to make your own creative containers, Container Gardener's Handbook will show you how to use overlooked pots to their full potential and transform your garden--whether you've only got a modest balcony, small square of patio or just a windowsill.



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Help Us Grow!

Our follow-up email survey provides us the tools we need to grow and improve the quality of our program.




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References

- **Home & Landscape Pests.** UC IPM. <http://ipm.ucanr.edu/PMG/menu.homegarden.html>
- **Vegetable Gardening in Containers.** Joseph G. Masabni. Texas A&M Agrilife Extension <https://cdn-ext.agnet.tamu.edu/wp-content/uploads/2016/05/EHT-062-vegetable-gardening-in-containers.pdf>
- **Types of Containers.** University of Maryland Extension Home and Garden Information Center. <https://extension.umd.edu/hgic/topics/types-containers>
- **Container Vegetable Gardening.** Ohio State University Extension. <https://lucas.osu.edu/sites/lucas/files/imce/LocalFood/1647.pdf>
- **Container Vegetable Gardening.** Iowa State University Extension and Outreach. <https://store.extension.iastate.edu/product/Container-Vegetable-Gardening>
- **Storing Fresh Fruits and Vegetables for Better Taste.** University of California at Davis. <http://ucce.ucdavis.edu/files/datastore/234-1920.pdf>

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Questions?



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