Sustainability at Home

Creating a Spring Herb & Vegetable Garden

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Mini, opal, and Genovese basils interplanted with tomatoes
## Introduction & Poll

<table>
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<th>Question</th>
<th>Details</th>
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<tbody>
<tr>
<td>1. Are you new to food gardening?</td>
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<td>2. Are you gardening in the ground, containers, or indoors?</td>
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<td>3. On a scale of 1-10 (10 = most), how desperately do you need to grow tomatoes?</td>
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Benefits of Homegrown Produce

- Flavor! Freshness = better flavor, more nutrients
- Connect with & learn about the natural world
- Teaches kids to appreciate vegetables & gardening
- Lower carbon footprint for your family’s food
- Varieties!
Getting Started

Start small
Garden overwhelm is real! Just 2-3 favorite herbs you love, some tomatoes and cucumbers will offer plenty of rewarding benefits to start

Work with your conditions
Indoor gardening, foggy areas, wind, containers, shade.
Make a sun map >

Know your zone
Frost dates, SF Bay Area coastal influence, climate zones, planting calendars for sunny areas, foggy areas

CA Garden Web
Soil Rules

The best way to grow great plants is to care for your soil

- Healthy soil is a balanced, living ecosystem
- Healthy soil has structure
- Feed your soil, not your plants
- Avoid:
  - Chemical pest & weed control
  - Chemical fertilizers
  - Bare soil
  - Leaf blowers
  - Walking on soil
  - Driving cars or equipment on soil
  - Tilling
Soil Rules

- Feed the soil, not the plants
- Always & often:
  - Add compost
  - Add more compost
  - Cover the soil (mulch)
  - Leave the leaves
  - Use cover crops + “chop-and-drop”
Soil Rules

IPM = Integrated Pest Management

- Ecosystem-based approach to minimizing pest damage
- Monitoring and correct identification of pests
- Management using habitat manipulation and fostering a healthy overall balance
- Plant ‘companion’ flowers to support beneficial insect populations
Water-Wise Gardening

• Install a drip irrigation system (or retrofit)
• Monitor and repair to prevent leaks and run-off
• Water in the early morning
• Avoid overhead watering
• Mulch!
• Reduce or remove lawn areas (sheet mulch)
Reuse & Repurpose Materials
Site Selection

Sun - Based on your sun map & observation data, which locations get the most sun? How many hours?

- **Sun** = full, unobstructed sun
- **8+ hours**
  Large tomatoes, peppers, eggplant, cucumbers, pumpkins, melons, corn, potatoes
- **6-8 hours**
  Can still grow the above, but choose fast-maturing varieties
- **4-6 hours**
  Cherry tomatoes, pickling cucumbers
  Beans, peas, brassicas, root crops (beets, carrots, radishes)
- **> 4 hours**
  Lettuce, greens (kale, swiss chard, arugula)
Site Selection

Other Considerations

• Wind protection
• Heat-sink (eg. south-facing wall)
• Morning vs. afternoon sun
• Access to water source
• Proximity to trees or other established plants
• Soil quality and safety
• Pest protection (deer, rabbits, gophers)

The legendary Los Altos front yard edible garden of Rosalind Creasy
Raised Beds

- Improved drainage
- Safer ergonomics
- Custom-mix soil (raised bed blends in bulk)
- No digging or turning needed
- Can be simple or elaborate
- Can be kitchen counter-height or just 6” high
- Discourages foot traffic
- Can facilitate netting or row cover use, or feature built-in supports
- Can line with gopher mesh if needed
- Can use recycled or repurposed materials (ensure they don’t leach)
- Elevated planters vs. raised beds
Container Gardening

- Great for balconies or rooftop terraces, patios and decks, urban areas with contaminated soils
- Can shift containers as plants grow and seasons change
- Choose the largest containers you can find, or build planters. Make sure they are sanitized.
- Drill drainage holes
- Select varieties developed for containers
- Water regularly and evenly -- containers dry out fast in hot weather. Check using finger-test
- Use new, high-quality potting mix (not garden soil)
- Starting a month after planting, apply organic fertilizer every two weeks

See [this Treehugger post](#) for several recommended varieties
Seedlings or Seeds?

• Beginning gardeners find it easier to start with seedlings
• After a few successes, try starting your plants from seeds
  – unusual, rare, or new varieties
  – more control over timing
• Select seedlings with:
  – healthy leaves and stems
  – few flowers (or none), no fruits
  – uncrowded roots

A smaller, healthier plant will be less stressed and stunted, and will be able to grow faster once transplanted.
Seedling Care

Hardening Off
gradually acclimating a young plant from a controlled climate to one with more extreme conditions (outdoors)

• Ask the nursery staff if your seedlings have already been hardened off
• Bring plants home and place them in a bright but sheltered location
• If not hardened off, do so over a 2-week period
• If the plant is ready but the weather is too cool, up-pot the plant. Don’t let it get rootbound
Tomatoes

You need an entire life just to know about tomatoes.
- Ferran Adria
Two Types

Indeterminate

- Growth and fruit development continue until stopped by frost
- Fruit development is spread out over many months
- Usually more flavorful, more leaves per fruit

Determinate

- Short, bushy, fruit all at once
- Better for small yards or short seasons
- Good for canning or drying
Days to Maturity

Days to Maturity (DTM)

• **Extra-early**: 50 - 60 days
• **Early**: 52 - 70 days
• **Mid**: 72 - 80 days
• **Late**: 75 - 90 days

Days to maturity =

# of days from **transplanting** seedlings **in the ground** to first ripe fruit

• Ideal growing conditions
• Based on **degree days**

[ipm.ucanr.edu/WEATHER/abtddcalc.html]
Common Tomato Types

**Classic**
- Round & smooth, from medium-small to medium-large
- Also called main crop, salad, or slicing tomatoes

**Beefsteak**
- Large to very large, often irregular in shape, usually later to mature

**Cherry**
- Small, bite-sized
- Fewer days to maturity (DTM)
- Good for cooler Bay Area microclimates

**Paste**
- Generally elongated shape, usually meatier with less seed gel
- Good for processing as sauce & paste or for drying
When to Plant

Wait

• Soil is warm, nights are 55°F
• Usually around late April / early May
• Don’t plant-out too soon. Seedlings planted later frequently catch up and are stronger, less susceptible to disease and infestation

Harden Off

• Set outside during the day for a week or two
• Move to a location protected from wind, sun, and night-time chill

Transplant

• Leave outdoors at night before transplanting
• Transplant on a cloudy day or a late afternoon
Planting Tomato Seedlings

Plant deep! Or sideways

- Pinch off leaves and bury ½ the stem
- Plant on an angle, if necessary
- Space 1 to 4 feet apart
- Stake or cage the same day you plant

from UCANR Growing Tomatoes
Support your Plants

Why?

• Better **air circulation** helps prevent foliage diseases & fruit-rot

• Keep the fruits up **off the soil**

Many methods

• **Stakes** - tie or clip-up new growth weekly
• **Cages** - sturdy, large
• 6” concrete reinforcing wire
• Hog fencing
• Wrap black roofing paper or plastic around bottom foot, if windy
• Tomato ladders
• Florida weave
• etc.
Pruning Tomatoes

To pinch or not to pinch?

Determinate: No
• All stems produce fruit

Indeterminate: Maybe
• Pinch early for earlier, larger fruit
• Hot weather locales - less pruning
  – Foliage protects from sunscald
• Cool weather locales - more pruning to allow more light and air flow.
Herbs
Chives

Benefits & Use
- Historically used by farmers to ward off pests
- Milder flavor than other *Allium* species

Cultivation
- Well-drained soil, rich in organic matter

Propagation
- Grown from seed, division

Maintenance
- Pinch off the flower buds to encourage leaf growth
- Continually regrows leaves, so regular harvesting encouraged
Benefits & Use
- Widely used for its fresh flavor and bright green color
- Attracts pollinators and beneficials

Cultivation
- Start with seeds indoors or buy a plant
- Allow some to flower and set seed

Propagation
- Start from seeds

Storage & Preservation
- Store refrigerated as a tender herb
- Does not dry or freeze well
Rosemary

Benefits & Use
- Versatile and widely used
- Strongly flavored
- Attracts pollinators

Cultivation
- Start with a plant
- Hardy and easy to grow in our climate

Propagation
- Stem cuttings or layering

Maintenance
- Will grow larger over many years; prune for size and health

Storage & Preservation
- Store as a hardy herb
- Can be dried or frozen
Herbs for Pollinators and Beneficial Insects

Many **herb flowers** support important **pollinators** and **beneficial insects**

- Plant amongst vegetables, fruit trees
- Allow some to **flower**
- Create habitat gardens to attract **butterflies, bees, hummingbirds, parasitic wasps**
- Support a population of **beneficial insects**
Which Herbs to Grow?

Consider...

- **where**
  - your microclimate
  - space
  - sun & light exposure
  - containers or in-ground
  - ease of access

- **personal preferences**
  - gardening skill level
  - taste preferences & aversions - eg. cilantro, fennel
  - your cooking style - what you use most, what you buy
  - other cuisines you’d like to explore

- **availability**
  - herbs that are difficult to find
  - herbs that are better fresh than dried
  - potency - how much is used at one time

_Mints in pots for containment and easy access [photo: S. Thanawala]_
Cilantro

Benefits & Use
• Essential in many cuisines
• 2-in-1 leaves & seeds (coriander)

Cultivation
• Start seeds indoors or direct sow
• Prefers cooler weather and shorter days
• Succession-sow for a consistent supply

Propagation
• Start from seeds

Maintenance
• Pinch back flowers to extend harvest

Storage & Preservation
• Refrigerate in a jar with 1” water and a lid or sealed bag over top
• Don’t bother with dried cilantro
Basil

Benefits & Use
• Much beloved essential herb
• Complements tomatoes, eggplant, peas, and more

Cultivation
• Start seeds indoors in spring
• Leaves sunburn easily
• Succession-sow for a consistent supply

Propagation
• Start from seeds
• Stem cuttings (eg. non-flowering types)

Maintenance
• Pinch back flowers to extend harvest

Storage & Preservation
• Don’t bother drying - flavor is lost
• Store like cut flowers
• Freeze chopped in oil, or infuse
Maintaining Herb Gardens

Use them! “Herbs like haircuts”

**Perennials**
- Prune / use frequently
- For less-hardy herbs, don’t cut severely before winter
- Have a plan for flowers and / or seeds
- Divide, propagate, or replace when plants become woody
- Rosemary, sage, thyme, oregano, tarragon, lemongrass, chives, winter savory, leaf celery, lavender

**Annuals**
- Plant in spring
- Succession-sow for herbs with short growth cycle (cilantro, dill)
- Basil, cilantro, dill, summer savory, parsley, chervil

*Lovage*
Live in a Cave? Try Microgreens!

- No light source required
- No feeding, up-potting, hardening off
- Quick 2-3 week cycle
- Nutrient dense
- Unique & unexpected flavors
- Basil, cilantro, dill, chervil, peas, radishes, broccoli, kale, mustard, etc.

*Introducing Microgreens: Younger, And Maybe More Nutritious, Vegetables* > [via NPR]

*Microgreens seed suppliers: True Leaf Market, Johnny’s, High Mowing*
Thank you!

Questions?
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UCCE Master Gardeners of San Mateo & San Francisco Counties
Advice to Grow By
... Ask Us!

Got Questions? Ask a Master Gardener!

Call our helpline at: (650) 276-7430

Email questions to: mgsmsf@ucanr.edu (please include your name, city, phone # (best time to call), question/description of problem, photos)

When our helpline offices reopen, visit us in three locations (closed on holidays). If bringing samples, please enclose in a sealed container.

Website: smsf-mastergardeners.ucanr.org

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