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# Vegetable Gardening in the Desert

*With Charlie Alcorn of Watershed Management Group*

*City of Phoenix - Phoenix Water Smart | 10.13.2021*



# Desert Living Home Tour!

Saturday, October 23rd 10a.m. - 3p.m.

Virtual and In-Person

Registration Open  
[watershedmg.org/hometour](https://watershedmg.org/hometour)



# Class Overview

## Part I – Site Planning and Prep

- Site your garden and prepare for planting

## Part II – Seasons and Species

- Select food producing plants appropriate for each growing season

## Part III – Tips for Success & Sonoran Inspirations

- Incorporate additional “green” practices into your gardening
  - Recognize abundance in the Sonoran Desert
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# Challenges to Desert Gardening?

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# Challenges to Desert Gardening

- Soil Quality
  - Caliche
  - Pests
  - Dry Climate
  - Hot Hot Hot!
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# Site Planning and Prep

## Garden Location

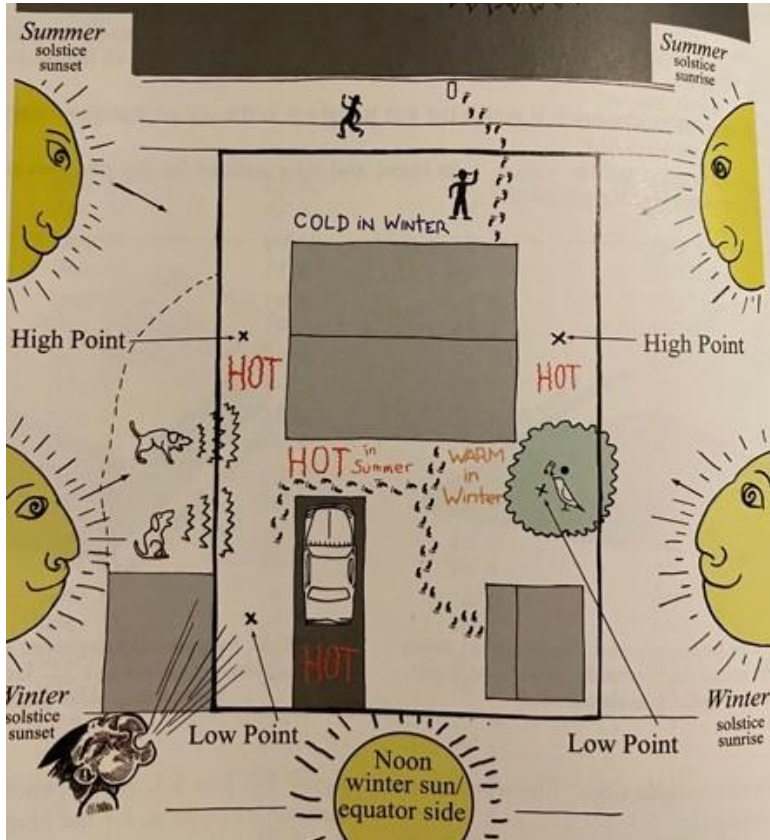
- Sun exposure & shade
  - Soil
  - Access to water
  - How much food do you need to grow?
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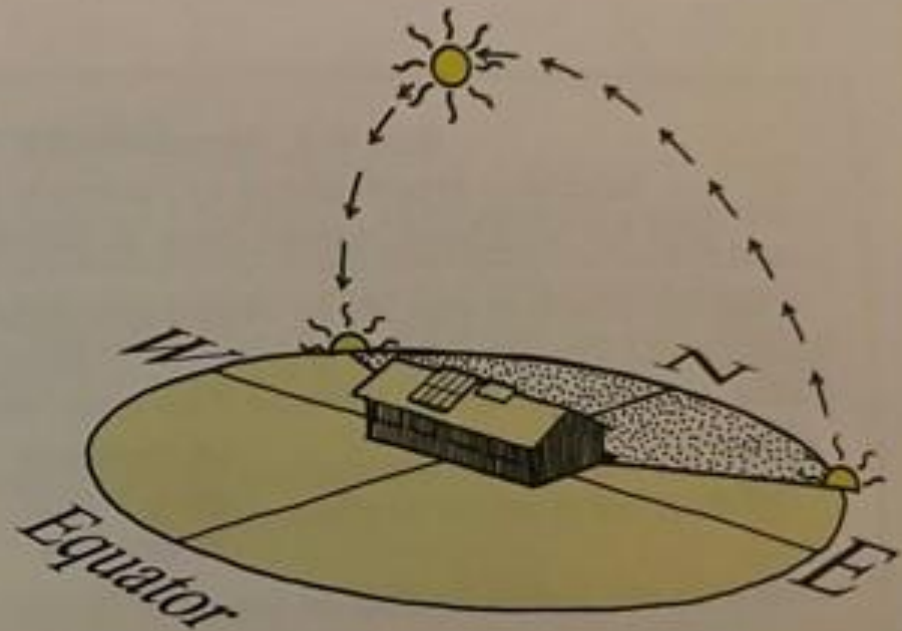
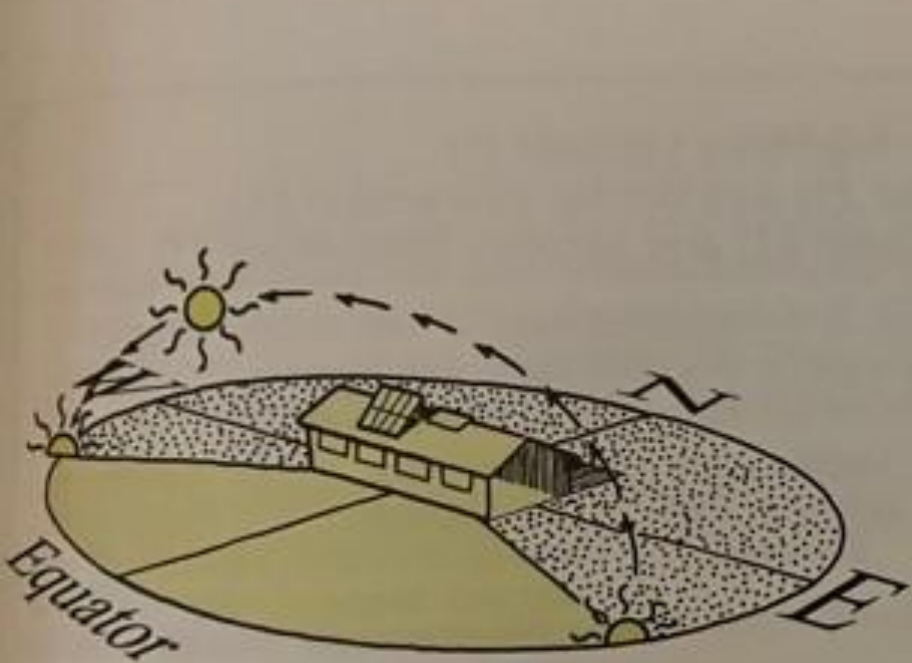
# Sunny Side Up

## Southern Exposure

- Maximizes solar benefits for food production
- What sun exposure do your plants want?
- Full sun, partial sun, partial shade, full shade









Shade





© Edoardo Sceppl/solent



# Microclimates

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# Where to Set Your Roots

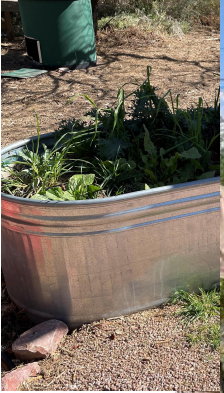


## Planting Containers

- Pros: You pick the soil, you pick the place, less bending over and knee strain
- Cons: Need for more irrigation, upfront investment

## What the Plants Want

- At least 18 inches of rich soil
  - Plan for drainage
  - Pro tip - Cover the soil between growing seasons (mulch cover, compost, cover crop)
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# Where to Set Your Roots



## Garden Beds

- Pros: Better moisture retention, use water harvesting principles, potentially lower upfront cost
- Cons: Need to improve desert soil, caliche

## Desert Soils

- Desert Soils are generally alkaline - source of many nutrient issues
  - Plan to add organic material (compost, manure)
  - Dig deep to discover caliche
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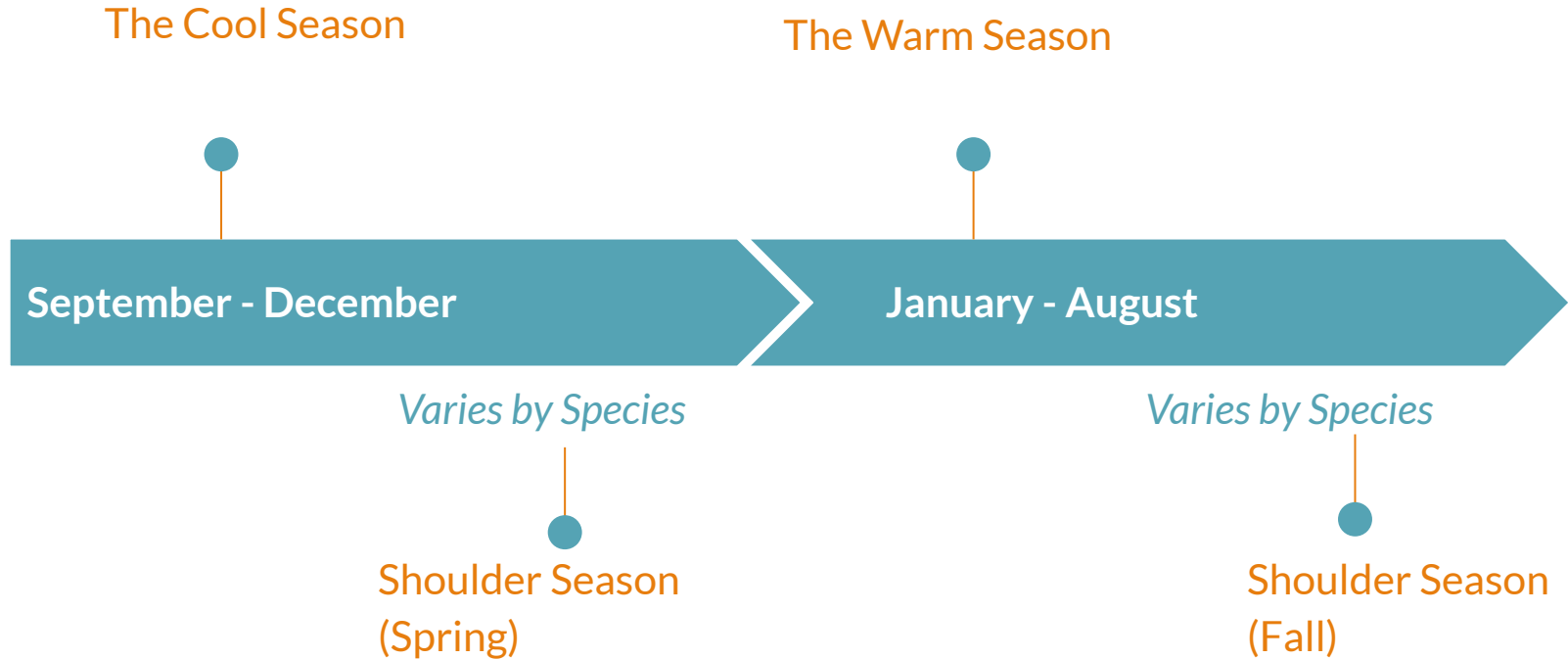
# Seasons & Species

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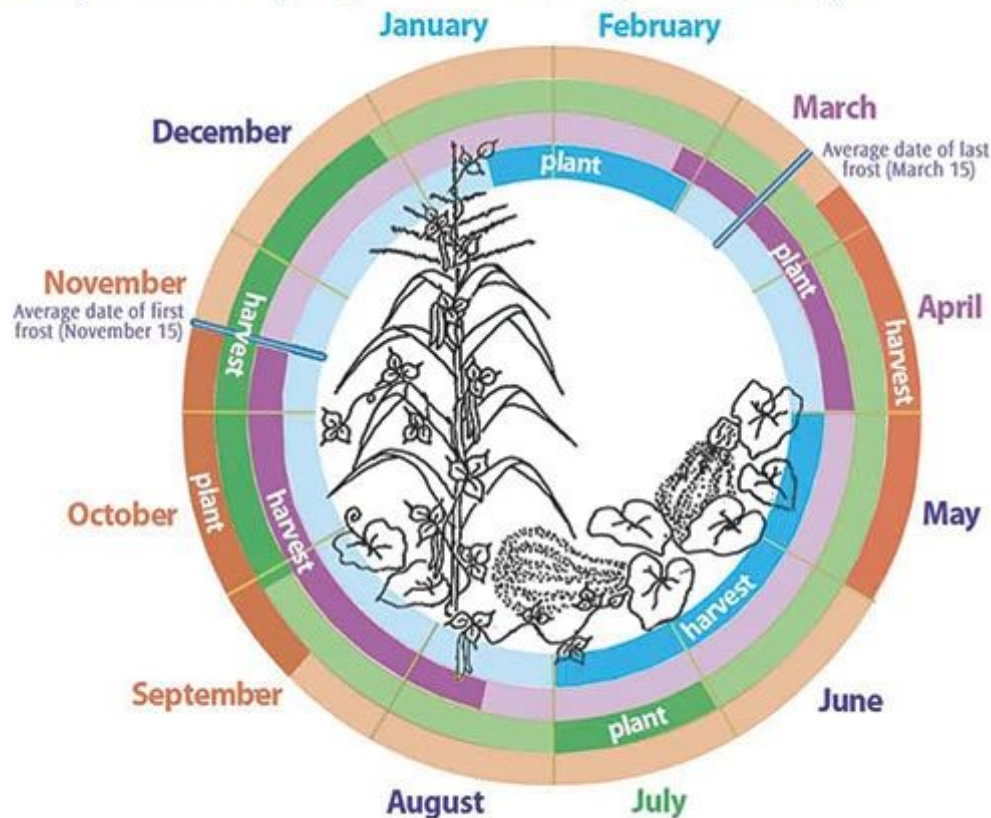
# Planting Seasons

Start dreaming / planning ahead a season



# Planting & harvesting in the Low Desert

Low desert includes elevations below 3500 ft in the Southwest, such as the Tucson and Phoenix metro areas. Contact your local extension agent or garden center for local planting times if outside this region.



## Early Spring mid JAN – late FEB

arugula, chickpea, cilantro, fava, kale, lentil, lettuce, onion, pea, radish, swiss chard, wheat, wildflowers

## Spring early MAR – late APR

amaranth, bean, chichiquelite, chile, corn, cotton, cowpea, cucumber, eggplant, gourd, herbs, melon, sorghum, squash, sunflower, tobacco, tomato (plants), tomatillo (plants), watermelon

## Monsoon JULY

amaranth, bean, cowpea, corn, cucumber, devil's claw, eggplant, melon, panic grass, sorghum, squash, sunflower, tomato (plants), tomatillo (plants), watermelon

## Fall late SEP – mid NOV

arugula, beet, broccoli, cabbage, carrot, chickpea, cilantro, fava, garlic, greens, kale, lettuce, lentil, onion, pea, radish, spinach, swiss chard, wheat, wildflowers

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# It all starts with the right seed

## Annual Species

- Life-cycle is one year or less
- Typically entire plant is harvested, or plant naturally dies after one season

## Perennial Species

- Life cycle lasts more than one year
  - Will continue to produce food seasonally over its lifetime
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# It all starts with the right seed

## Generic store-bought seeds / starts

- Readily available and cheap
- Accessible, healthy way to produce your own food

## Desert adapted varieties

- Cultivated in the desert and bred to survive here
  - Culturally significant and ecologically responsible to cultivate in the Sonoran Desert
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# BRAG about Cool Season Crops

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# Brassicas

## Mustard (Brassica) Family including:

- Broccoli
- Brussel sprouts
- Cabbage
- Cauliflower
- Collards
- Kale
- Kohlrabi



**Root**

**Including:**

- Carrots
- Radishes
- Parsnips
- Beets
- Turnips



# Alliums

## Including:

- Onions
- Garlic
- Bunching Onion





# Greens

## Leafy greens including:

- Lettuce
- Spinach
- Arugula
- Chard



# Herbs

## Including:

- Parsley
- Dill
- Mint
- Sage
- Tarragon

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# Common Issues

## Frost

- Many cold weather crops will get frost damage, but recover (mostly aesthetic)
- Experiment with coverings / insulating structures

## Premature Bolting

- Annuals put a lot of energy into producing flowers and seeds at the end of their life
  - Look a recipes for flowers and collect seeds
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# Warm Season Crops

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# Peppers



**Tomatoes**



**Tomatillo**





**Eggplants**



**Cucurbits -  
Cucumber, Squash,  
Mellon,**



## Common Issues

### Sun / Water / Nutrient Deficiencies

- Troubleshoot plant stressors - leave it to the leaves
  - Brown center - sunburn
  - Brown margin - nutrient issue
  - Yellowing - watering issue
  - Size. I.e too small or too big - Nitrogen excess or deficiency

### Pests

- Pick varieties that are pest resistant
- Do research and learn before you kill insects - There is a beneficial balance to every garden

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# Tips for Successful Gardening

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# A few extra Tips

1. Siting your garden
2. Water Sources
3. Mulch
4. Support Pollination

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## Tip 1 - Site your garden wisely



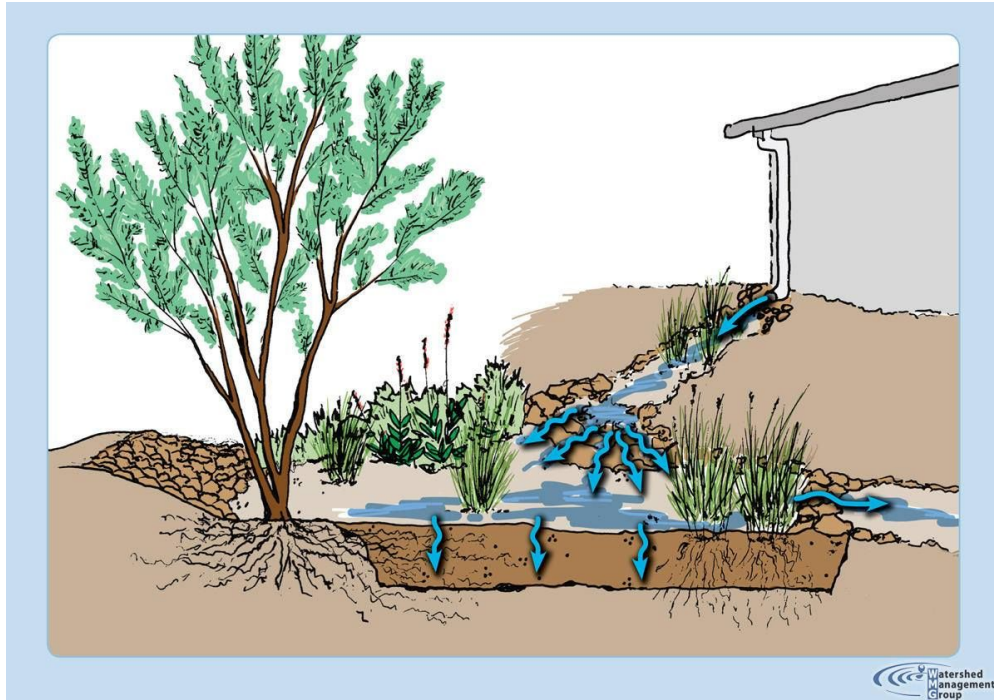
### Easy access

- Place close to your home where you'll see it and interact with it
  - Easy watering!
  - No yard. No problem. Find a community garden near you
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## Tip 2 - Save Water

### Consider watering by hand

- Saves water and gives you a periodic chance to check the pulse of your garden
- Water early a.m. - reduces evapotranspirative loss and maximizes photosynthetic benefits for plants



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## Tip 3 - Mulch it!



### Mulch options

- Organic mulch - wood chips, leaf litter, chop and drop, compost
  - Inorganic mulch - gravel, decomposed granite, other rock material
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# Starting Small

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## Tip 4 - Support Pollination



» Flowering plants and shrubs, such as chuparosa and penstemon, attract and support pollinators

Activate Windows  
Go to Settings to activate Windows.

### Plant native flowering plants

- While flowering plants in general will help attract and support pollinators, native flowering plants support our local ecosystem
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# Sonoran Inspirations

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## Try Native Edibles

### More Diversity

- This provides food for you and local wildlife

### Forage desert abundance

- Enrich our native food web and sample local sonoran flavors
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Ocotillio Tea



# Sonoran flavors

fine art  
america



# Eat Your Yard!

## *The Desert Can Feed You*

Growing an edible food forest offers multiple benefits...

- Produces food for people and wildlife
- Provides clean air, shelter and shade
- Conserves water and energy

*Research all plants before harvesting to identify which varieties are edible and safe to eat.*

*Avoid using herbicides and pesticides*

*Choose native plants with differing fruiting seasons to enjoy food year-round.*

*Choose a variety of trees, shrubs, vines and ground cover plants. Plants of varying heights mimic a natural forest.*

*Group plants in clusters to maximize food production in small urban spaces.*



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**Thank you!**

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