



SPRING VEGETABLE GARDENING 101

BRANDON MERCHANT

- Owner of Southwest Victory Gardens
- Former Certified Pima County Master Gardener
- SmartScape Certified
- Former President of Tucson Organic Gardeners





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OUR PHILOSOPHY

- Healthy soil encourages healthy plants
- Healthy plants require fewer pesticides and fertilizers (inputs)
- Garden with our climate not against it
- Reduce water usage
- Limit external inputs
- Encourage a natural ecosystem



WHAT IS SUSTAINABLE GARDENING?

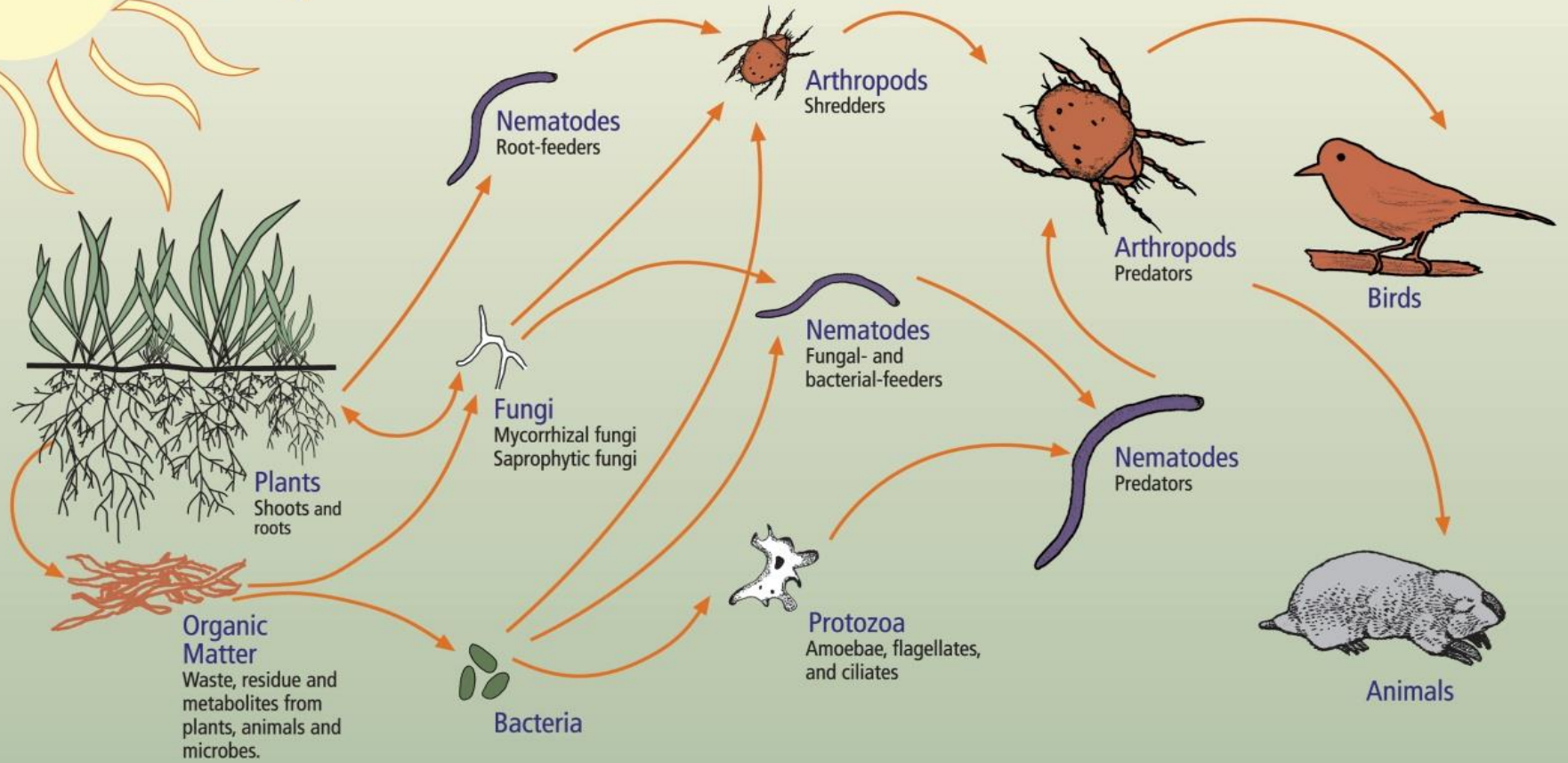


Food is
Ammunition -
Don't waste it.

UNITED STATES FOOD ADMINISTRATION

- Reducing or Eliminating the Use of Inputs
- Focus on improving soil
- Enhancement of entire ecosystems
- Reduction of water use
- Working Smarter

The Soil Food Web



First trophic level:
Photosynthesizers

Second trophic level:
Decomposers
Mutualists
Pathogens, Parasites
Root-feeders

Third trophic level:
Shredders
Predators
Grazers

Fourth trophic level:
Higher level predators

Fifth and higher trophic levels:
Higher level predators

WHY GARDEN IN TUCSON?

- It's Fun
- Variety
- Year Round
- Healthy
- Community
- Cost



THE CHALLENGES



- Learning Curve
- Poor Soil Quality
- Extreme Weather
- Water Scarcity/Quality
- Mother Nature/Bugs
- Maintenance



Tucson
Organic
Gardeners

soiling our hands since 1971

TUCSON ORGANIC GARDENERS PLANTING GUIDE

FOR TUCSON AND THE LOW DESERT

Jan 1 – Feb 15

FROM SEED

Arugula, Broccoli, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Collards, Dill, Fennel, Kale, Lettuce, Mustard Parsley, Bulb Onion (See Graphic), Potato

FROM SEEDLING TRANSPLANT

Artichoke, Broccoli, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Collards, Dill, Fennel, Kale, Lettuce, Mustard, Parsley, Spinach, Swiss Chard.

April 15 – May 31

FROM SEED

Amaranth, Basil, Cantaloupe, Cowpea, Cucumber, Malabar Spinach, Melon, Okra, Sorghum, Sweet Potato Slips, Summer Squash, Watermelon

FROM SEEDLING TRANSPLANT

Basil, Eggplant, Pepper

July 15 – August 31

FROM SEED

Bush Beans, Pole Beans, Corn (all types), Cowpea, Cucumber, Cantaloupe, T'itois Onion (See Graphic), Pumpkin, Sorghum Summer and Winter Squash

FROM SEEDLING TRANSPLANT

Tomato (July 15 - Aug 15)

Oct 15 - Nov 15

FROM SEED

Beets, Carrots, Garlic, Greens, Lettuce, Mustard, Pea, Radish, Turnip, Wheat (December – January)

FROM SEEDLING TRANSPLANT

Broccoli, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Collards, Dill, Fennel, Kale, Lettuce, Mustard Parsley, Spinach, Swiss Chard

LATE WINTER

SPRING

LATE SPRING

EARLY SUMMER

MONSOON

EARLY FALL

LATE FALL

March 1 – April 15

FROM SEED

Amaranth, Basil, Bush Bean, Corn (Sweet), Cucumber, Jerusalem Artichoke, Malabar Spinach, Melon, Pumpkin, Sesame, Sorghum, Summer and Winter Squash, Tobacco, Watermelon

FROM SEEDLING TRANSPLANT

Basil, Eggplant, Pepper, Tomato, Tomatillo

June 1 – June 15

FROM SEED

Pole Beans, Cantaloupe, Cowpea, Melon, Sweet Potato Slips

Sep 1 – Oct 15

FROM SEED

Arugula, Beet, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Celery, Chia, Chicory, Chinese Cabbage, Cilantro, Collards, Escarole, Fava, Garbanzo, Greens, Kale, Kohlrabi, Leek, Lentils, Lettuce, Maché, Mustard, Onion (See Graphic), Parsley, Parsnip, Pea, Radish, Rape, Rutabaga, Turnip, Spinach, Swiss Chard

FROM SEEDLING TRANSPLANT

Broccoli, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Dill, Fennel, Kale, Lettuce, Mustard, Parsley, Spinach, Swiss Chard

ONIONS



"SHORT-DAY" BULB ONION SETS

January 1 – February 15

TOHONO O'ODHAM I'TOIS MULTIPLIER ONION

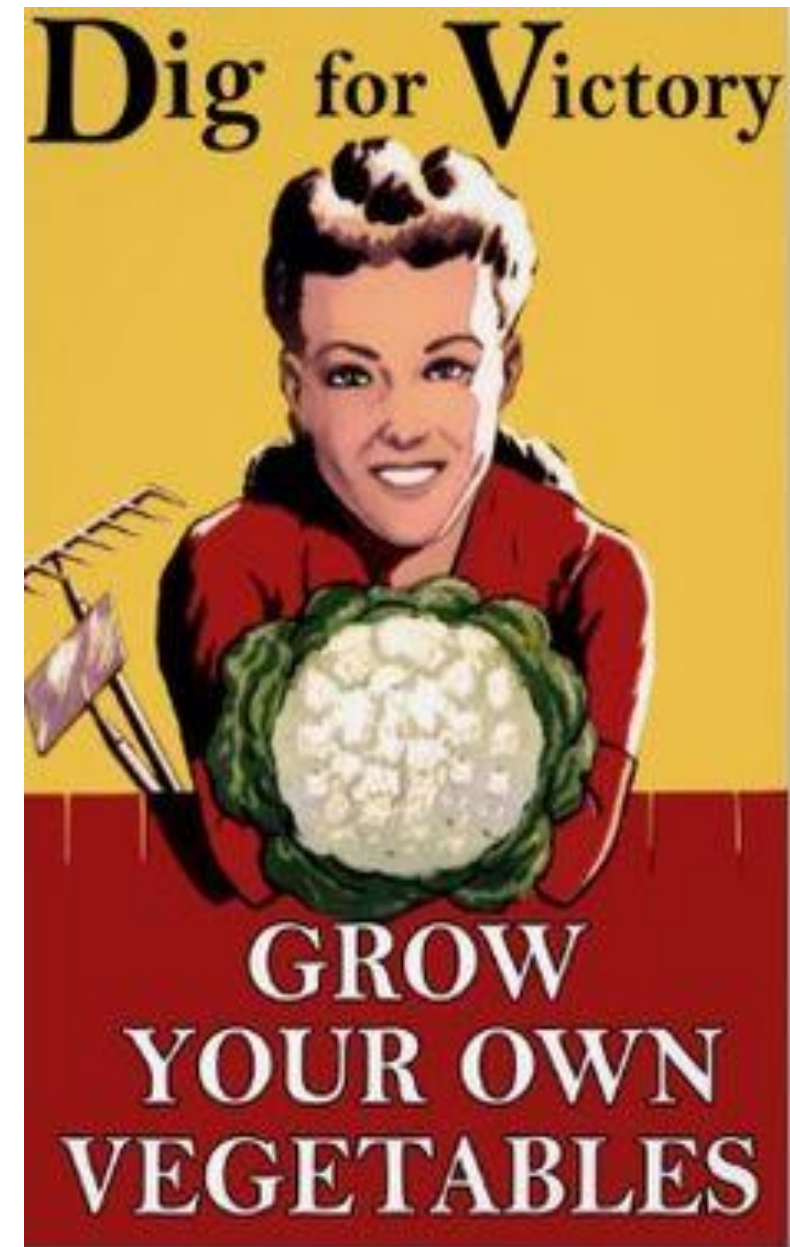
July 15 – February 1

GREEN BUNCHING/SCALLION

August 15 – February 1

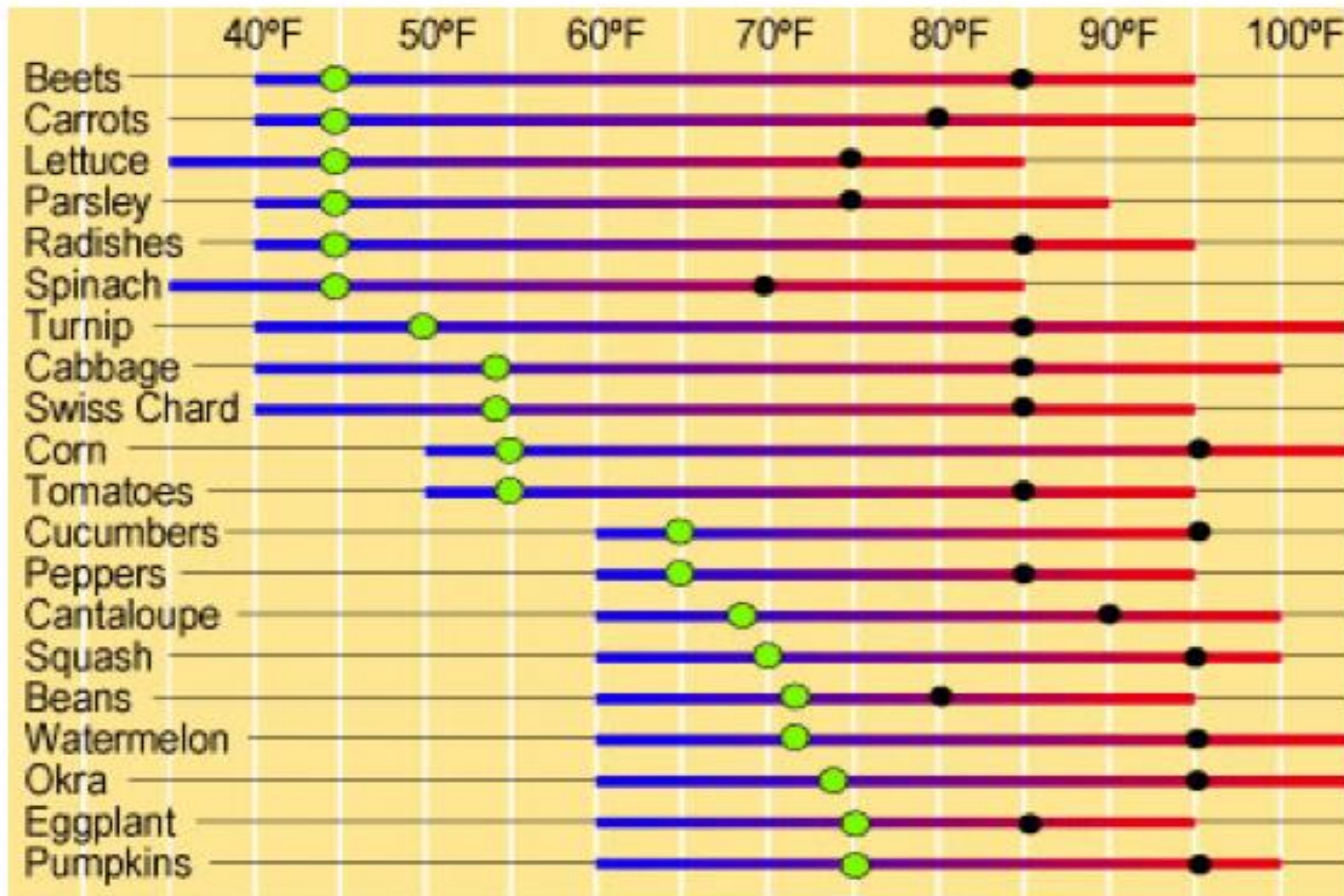


SPRING/SUMMER PLANTING SCHEDULE



- **Fruit Bearing Crops:**

- Early Spring: Jan – Mid-Feb
- Spring: Mid Feb – Mar
- Late Spring: April – Mid-May
- Summer: Mid-May – June
- Monsoon: July - Aug



● = Practical temp. for planting

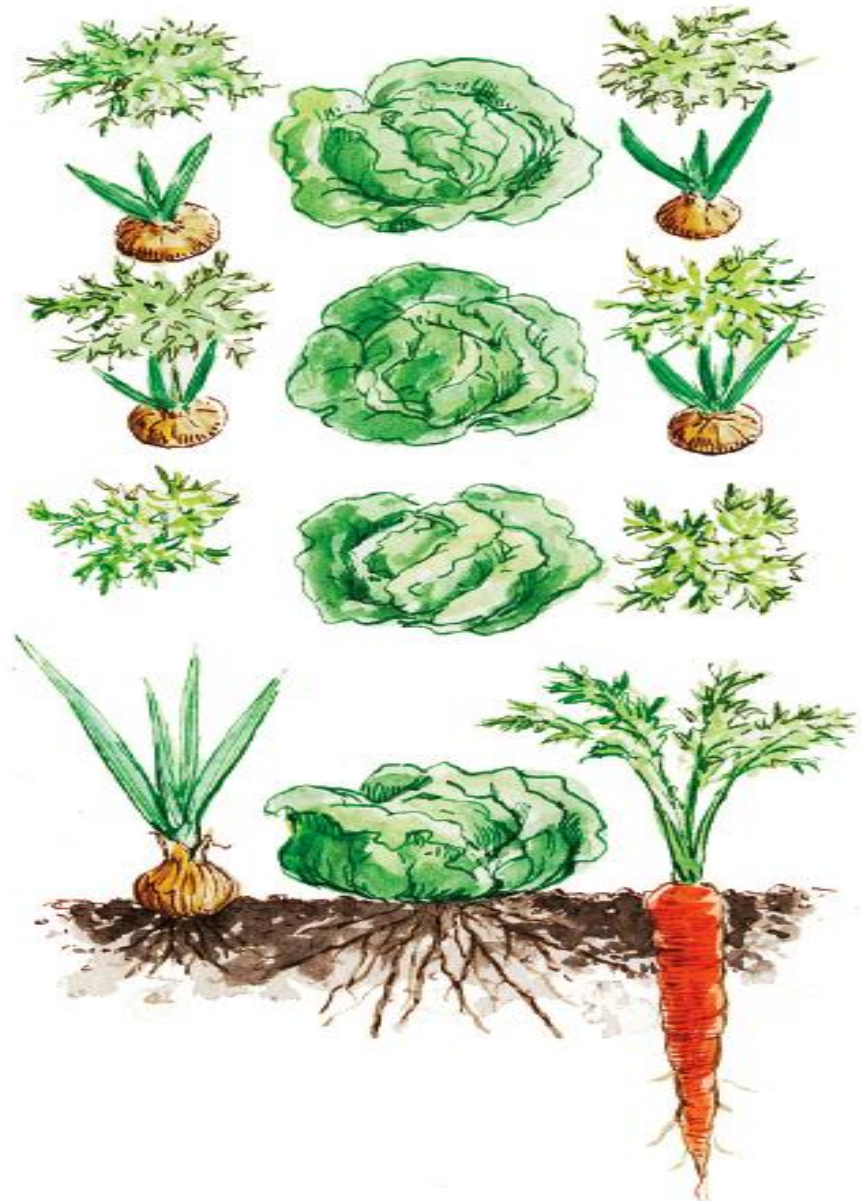
● = Optimal temp. for germination



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WHAT DOES A GARDEN NEED?

- Sun
- Water
- Healthy Soil
- Seeds and Plants
- Garden Buddies
- Love



LOCATION, LOCATION, LOCATION

Requirements:

- 6-8 Hours of direct sunlight
- Water Source
- Protection from Predators
- Afternoon Sun Protection
- Cool and Warm Season

Garden locations

- Close to Kitchen





GARDEN TYPES: SUNKEN BEDS



Groundwork for Victory



GROW MORE IN '44

In-Ground Sunken Beds:

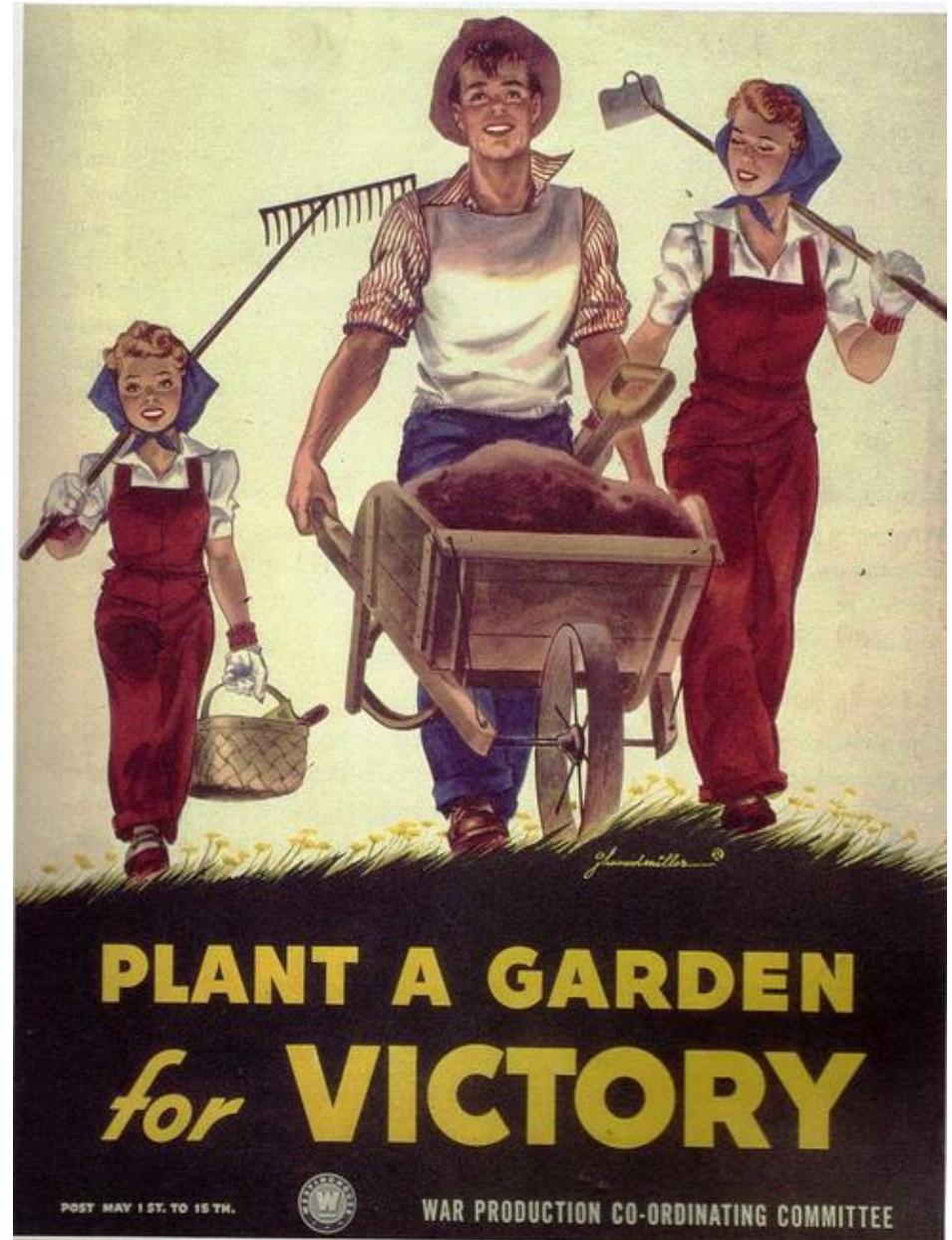
- Traditional growing method for desert.
- Can be lower water use
- Requires more time and labor to achieve optimum soil structure or tilth.



GARDEN TYPES: RAISED BEDS

Raised Beds:

- Less work than sunken beds
- Start with better soil
- Higher initial cost
- Season Extender
- Roots can be an issue







GARDEN TYPES: CONTAINERS

Containers:

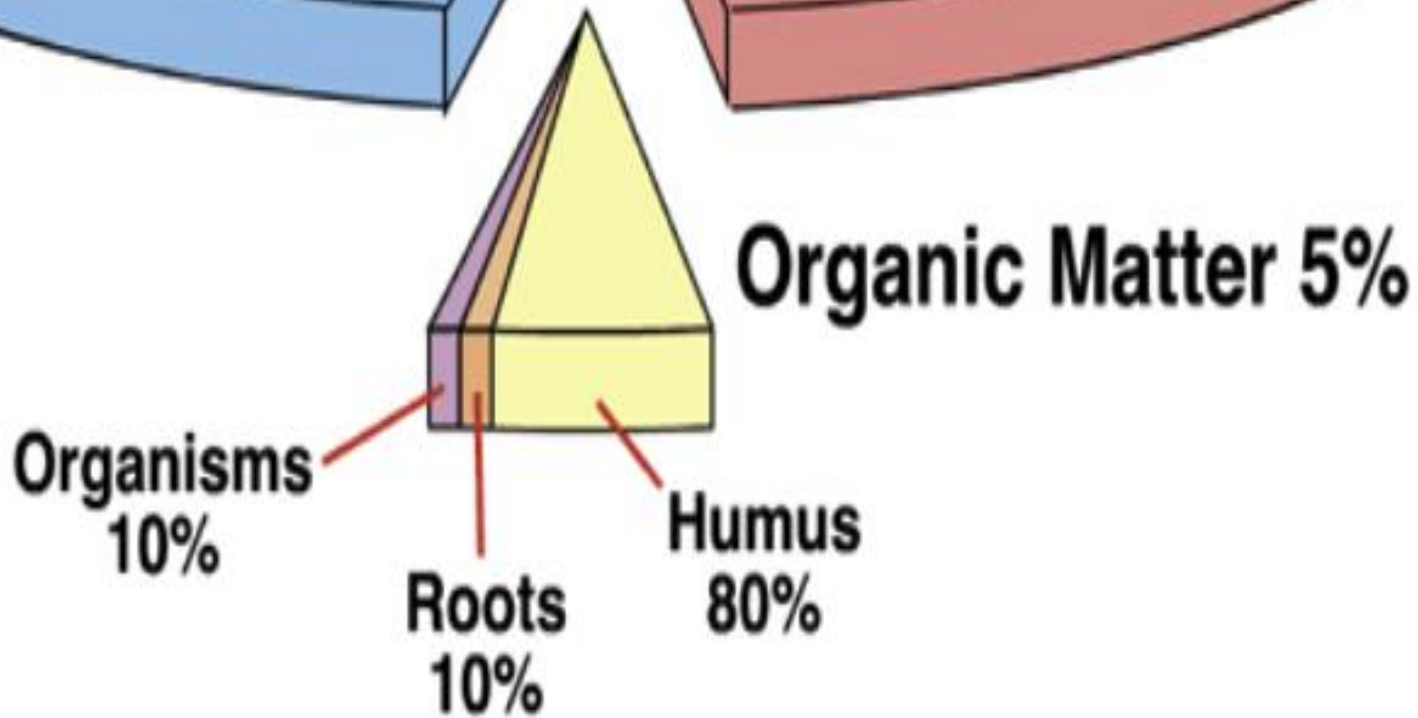
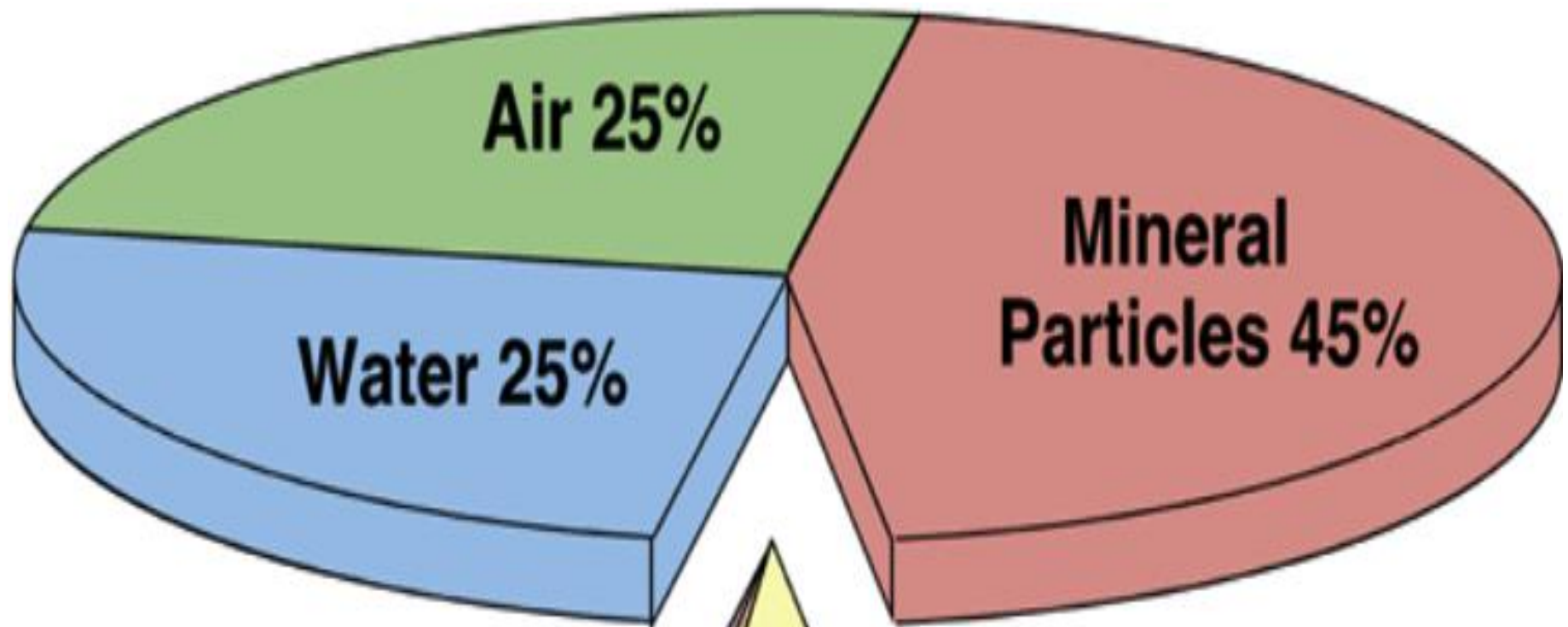
- Less Space
- Less Water
- More Watering
- Limited Selection
- Can be Mobile
- SWC's





The kind words can be short and easy
to speak but their echoes are truly endless
-mother teresa

OUTSEAR
COMMUNITY
for
Tucson Comm



CHARACTERISTICS OF SOIL

Desert Soil

- Low Populations of Micro-Organisms
- Low in Organic Matter
- Lacks Nutrients
- Compacted
- High Ph

Healthy Soil

- High Population of Micro-Organisms
- High in Organic Matter
- No Toxins/Pesticides
- Balanced Nutrients/Ph
- Porous
- Good Tilth/Texture



HOW TO BUILD HEALTHY SOILS

- Eliminate Synthetic Pesticides/Fertilizers
- Encourage the Soil Food Web
- Use Compost and Compost Teas
- No Till or Low Till
- Use Supplements if Needed
- Grow Roots Not Plants



BUILD THE SOIL: SUNKEN BEDS

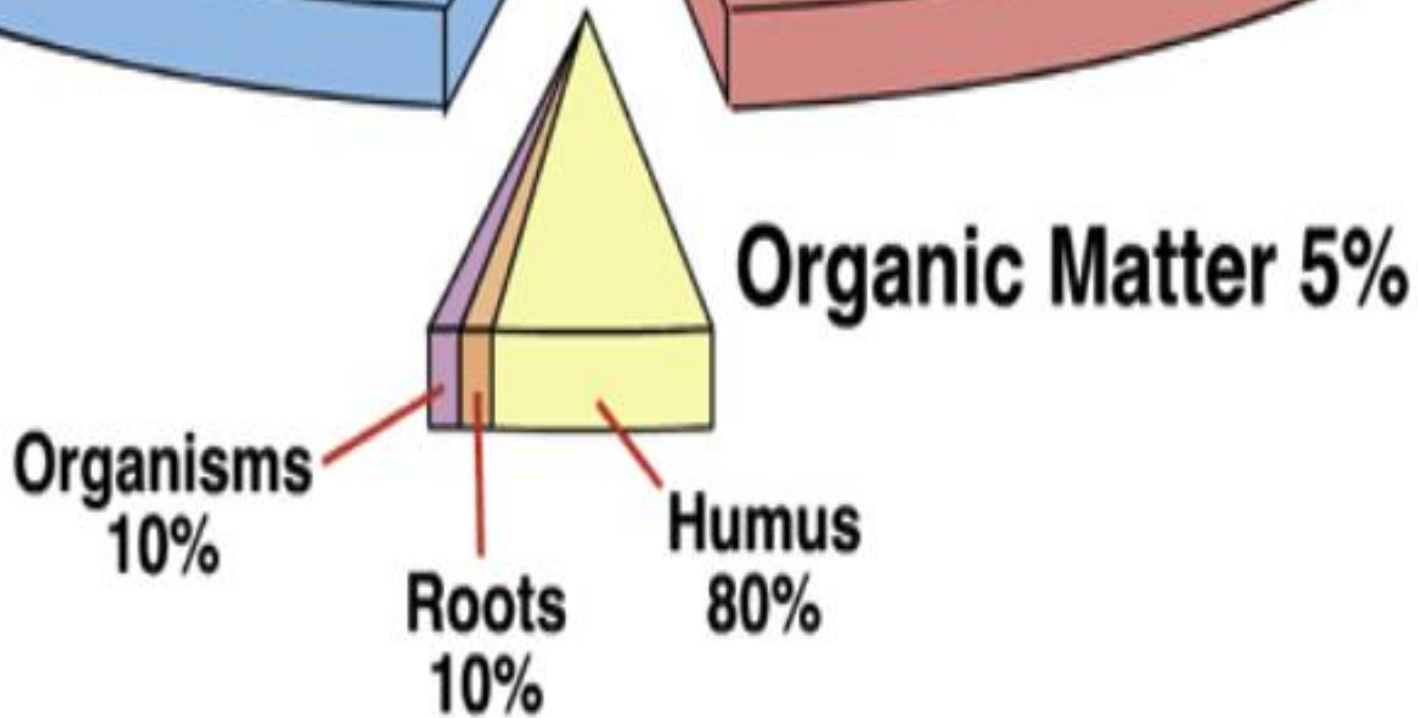
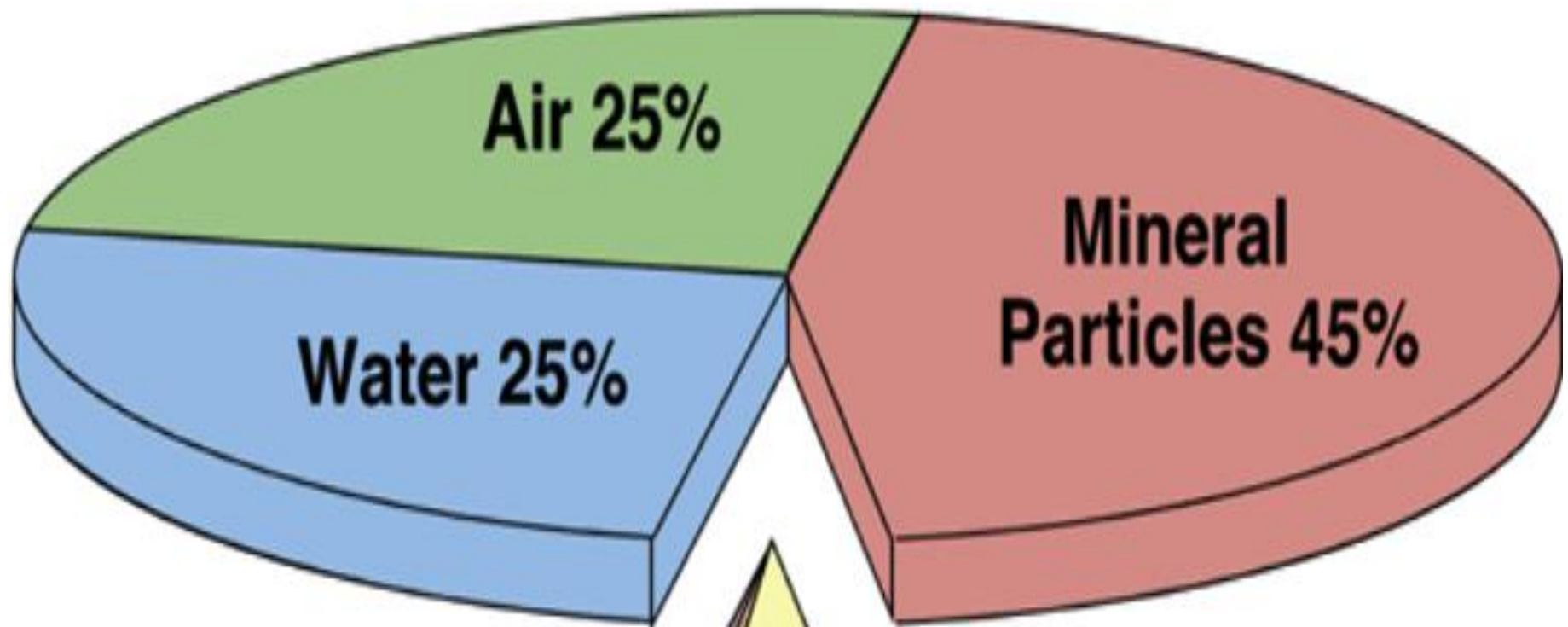


- For New Gardens, Replace 50% of Native Soil with Compost.
 - Dig out 1st ft. and set aside
 - Dig out 2nd ft. and set aside
 - Fill hole with top soil and compost 50/50 mix.
- Adds Soil Life
- Improves Tilth and Water Holding Capacity
- Balances Ph

BUILD THE SOIL MULCH AND COVER CROP

- Mulch, Mulch, Mulch
- Wood Chips for Trees and Shrubs
- Alfalfa Hay for Vegetable Gardens
- Avoid Straw
- Biologic not Geologic





WHAT IS POTTING MIX?



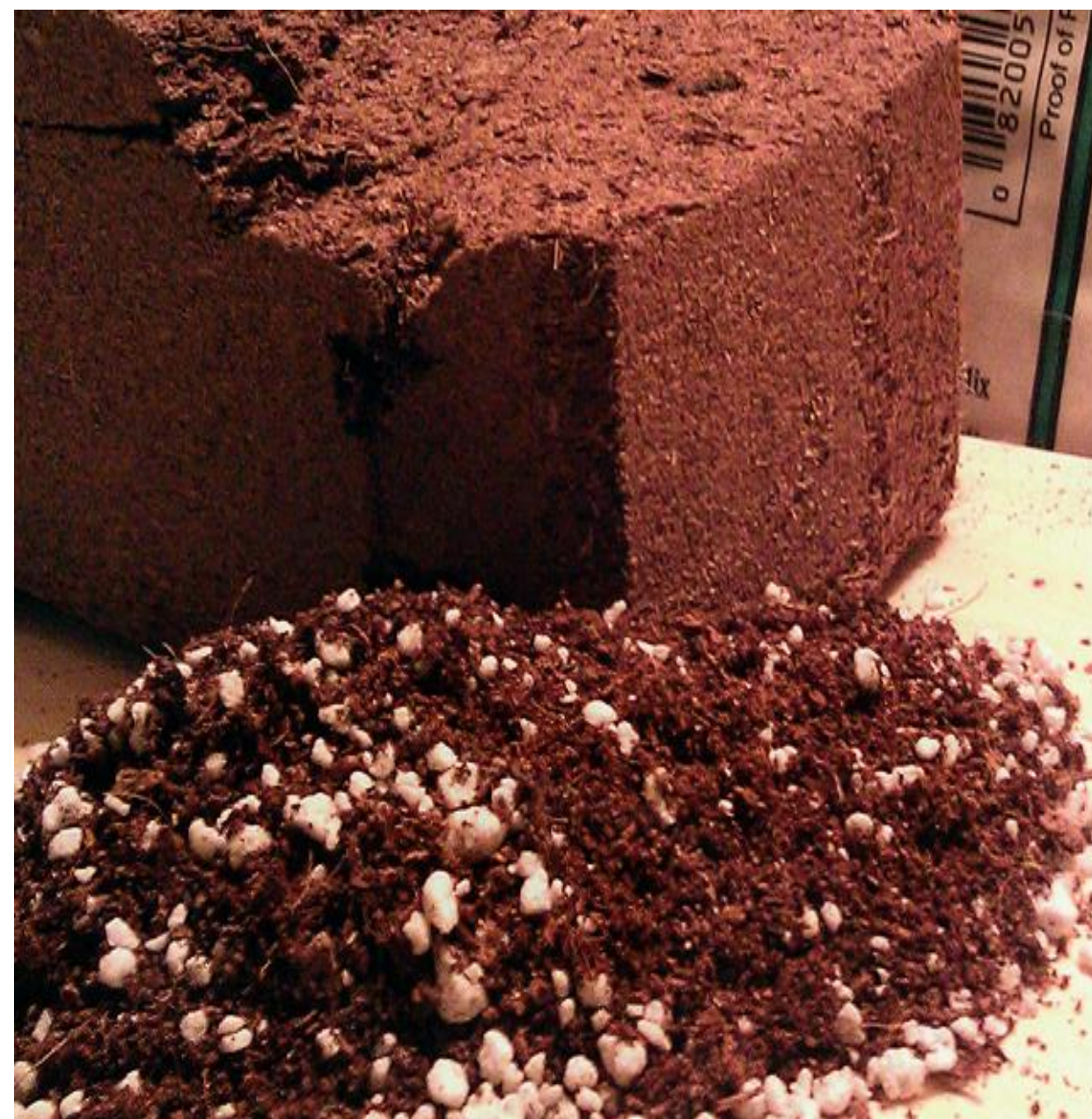
- Compost
- Coco Coir*
- Perlite
- Vermiculite
- Pumice
- Fertilizers
- Amendments

PLANT NUTRIENTS

- Compost
- Vermiculite*
- Fertilizers
- Amendments



AERATION AND WATER HOLDING CAPACITY

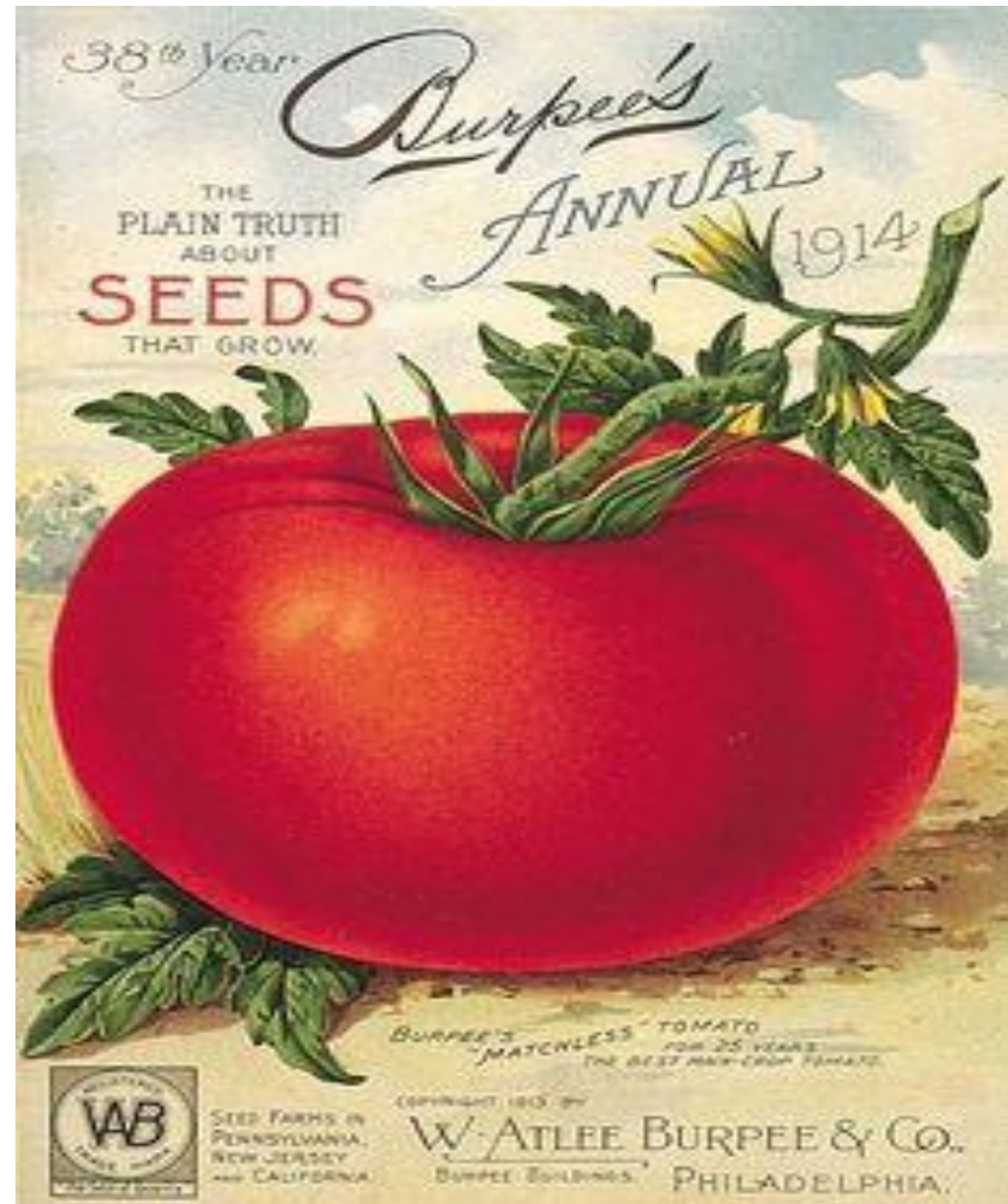


- Coco Coir
- Perlite
- Pumice
- Other Ingredients

POTTING MIX RECIPES:

- Seedlings & Small Pots
 - 2 parts coco peat
 - 1 part compost
 - ½ part perlite
 - ½ part vermiculite
 - Organic fertilizer
- Large Containers
 - 1 part coco peat
 - 2 parts compost
 - ½ part perlite
 - ½ part vermiculite
 - Organic fertilizer
- Raised Beds
 - 5 parts compost
 - 4 parts coco fiber
 - ½ part perlite
 - ½ part vermiculite
 - Organic fertilizer
- Root Cuttings
 - 1 part coco fiber
 - 1 part perlite

SEEDS AND PLANTS



- Heirloom, Open Pollinated, or Hybrid?
- Fast Maturity Dates
- Smaller Varieties
- Drought Tolerant
- Hybrids can be Helpful
- Use Local Guides
- You're not in Kansas anymore!



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Jan 1 – Feb 15

FROM SEED

Arugula, Broccoli, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Collards, Dill, Fennel, Kale, Lettuce, Mustard Parsley, Bulb Onion (See Graphic), Potato

FROM SEEDLING TRANSPLANT

Artichoke, Broccoli, Cabbage, Chinese Cabbage, Cauliflower, Celery, Cilantro, Collards, Dill, Fennel, Kale, Lettuce, Mustard, Parsley, Spinach, Swiss Chard.

April 15 – May 31

FROM SEED

Amaranth, Basil, Cantaloupe, Cowpea, Cucumber, Malabar Spinach, Melon, Okra, Sorghum, Sweet Potato Slips, Summer Squash, Watermelon

FROM SEEDLING TRANSPLANT

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Bush Beans, Pole Beans, Corn (all types), Cowpea, Cucumber, Cantaloupe, T'itois Onion (See Graphic), Pumpkin, Sorghum Summer and Winter Squash

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LATE WINTER

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EARLY SUMMER

MONSOON

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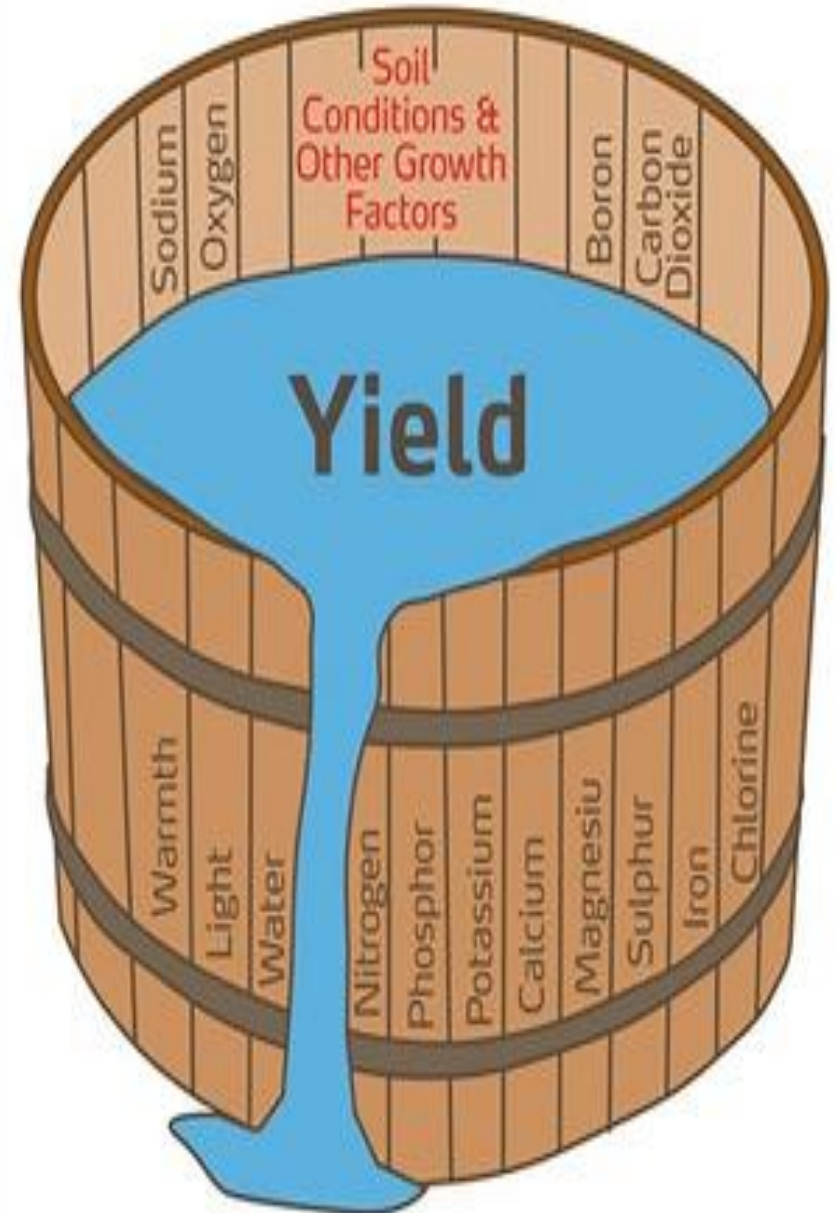
GREEN BUNCHING/SCALLION

August 15 – February 1



MAINTENANCE ISSUES

- Grow Healthy Plants
 - Feed the Soil
 - Law of Limiting Factors
- Summer Insects
 - Avoid Pesticides
 - Species Specific
- Sun Protection
 - 30-40% shade only
- Water Deeply and Infrequently



REDUCE YOUR IMPACT



- Eliminate pesticide use
- Substitute native landscapes for lawns and other high water use plants



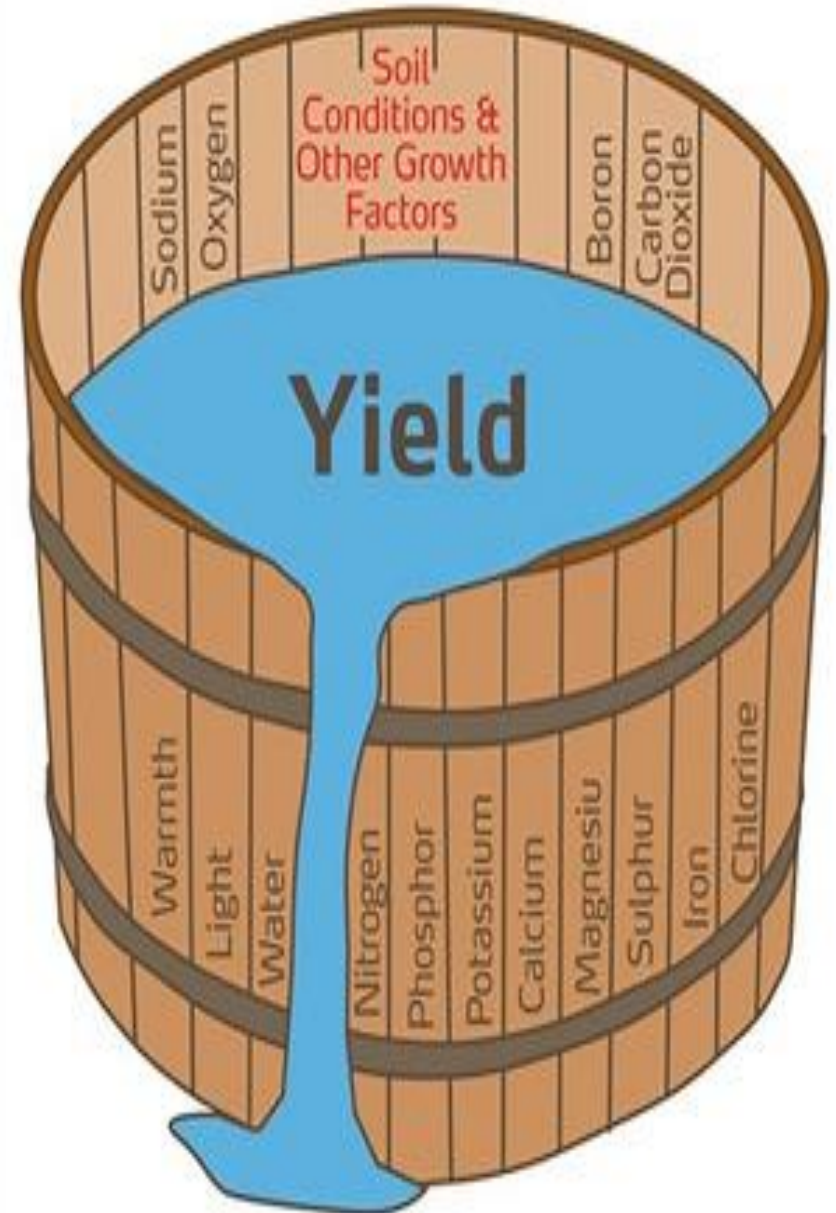
Reduce your Impact

XII. ECOLOGICAL INFORMATION:
Do not apply directly to water, or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. **This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.**

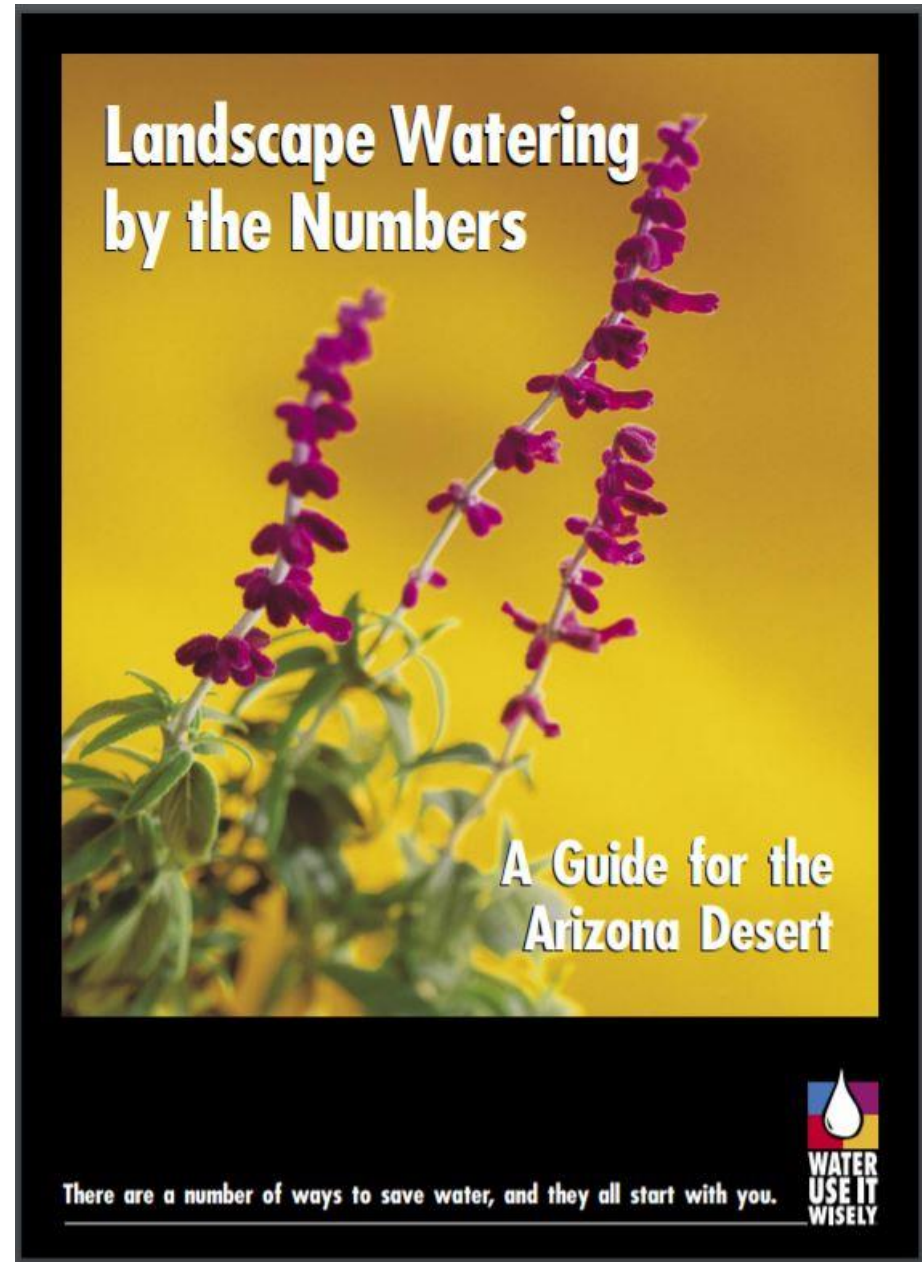
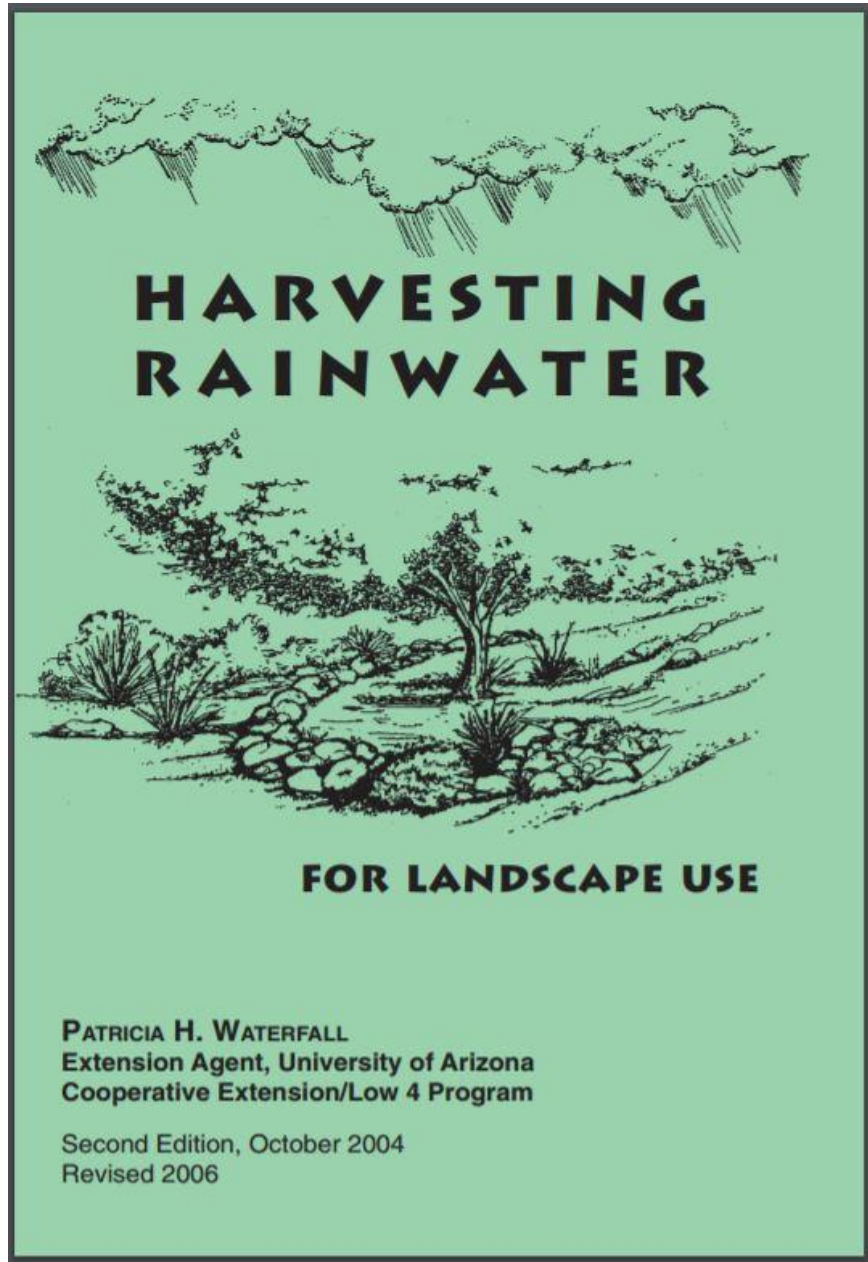


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IRRIGATION RESOURCES:



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COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

Watering Trees and Shrubs

Simple Techniques for Efficient
Landscape Watering



AZ1298

February 2014

Rainwater Harvesting

for Drylands
and Beyond

VOLUME 1 *2nd Edition*
Guiding Principles
to Welcome Rain into Your
Life and Landscape

Brad
Lancaster

Revised & Expanded
with more
integrated
Sun, Wind, & Shade
Harvesting

Foreword by Gary Paul Nabhan

GARDEN PLANNING

- Plan Ahead
- Timed Planting
- Intensive Planting
- Companion Planting
- Crop Rotation
- Plant Diversity
- Native Plants
- Save Seed





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RESOURCES

- Community Food Bank
- Local Nurseries
- Native Seeds/SEARCH
- Tank's Green Stuff
- OK Feed & Supply
- ARBICO Organics
- Join a Community Garden!





THANK YOU!

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(520) 576-7085