

# Successful

## Summer Vegetable Gardening



**Steve McIntyre**

**Yavapai County Master Gardener**



The University of Arizona  
Master Gardener Association  
Yavapai County Cooperative Extension

Prescott Office: 840 Rodeo Drive, Bldg C  
Prescott , AZ 86305  
928-445-6590 x222  
[prescottmg@gmail.com](mailto:prescottmg@gmail.com)

Verde Valley: 2830 N Commonwealth Dr Ste 103  
Camp Verde, AZ 86322  
928-554-8999  
[verdevalleymg@gmail.com](mailto:verdevalleymg@gmail.com)

Master Gardener web: [extension.arizona.edu/yavapai](http://extension.arizona.edu/yavapai)  
Speakers' Bureau Email: [ycmgspeakersbureau@gmail.com](mailto:ycmgspeakersbureau@gmail.com)  
facebook: [yavapaicountymastergardener](https://www.facebook.com/yavapaicountymastergardener)



# What are we going to talk about?

- Where to put your garden?
- In what?
- Fencing
- Vegetables in your flowers?
- Soil Preparation
- How to grow
- Growing Seasons
- Tomato Basics
- Fertilizers
- Pests
- Diseases
- Watching your garden grow



# Where?

- Choose a convenient spot.
- Near water.
- Full sunlight-6 hrs.
- Can be fenced or caged
- Avoid windy area.

*(good luck!)*



# Where-IN WHAT?



# Fencing

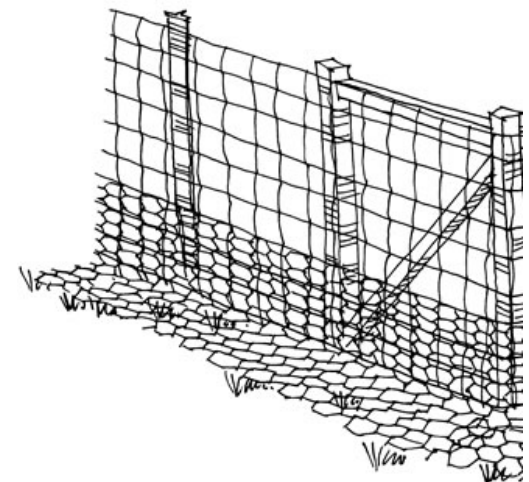
**Rabbits** - three foot tall chicken wire fence with 1-inch hexagonal mesh buried a few inches

**Deer** - 6 to 8 feet tall fence, mesh or electric could be considered, many designs

**Raccoon** - combination of rabbit and deer fence

**Squirrels** – completely covered cages

**Javelina** – sturdy wire field fence buried 6”



# Vegetables in your flower garden?



# Soil Preparation

## Container or Raised Bed Gardens

- 50/50 mix of compost or bagged planter mix with native soil.
- Mix thoroughly.
- Irrigate to settle.
- Allow to dry.
- Rake.





# Arizona Soil Map



WHERE	SOIL TYPE
PRESCOTT	SANDY
PV/CV	CLAY
SEDONA	SANDY/CLAY



# Soil Amendments

## Sandy Soils

Goal: increase water/nutrient holding

- All composted (organic) bulk materials
  - Sphagnum peat
  - Composted manure, hay, wood chips
- Peat Moss
- Vermiculite



# Soil Amendments

Clay Soils

GOAL: increase porosity, improve aeration, drainage

- Composted straw, wood chips
- Composted manure
- Sphagnum peat moss
- Perlite
- Sand (very large grain)



Careful!



# WHAT TO GROW?

## Prescott Area Vegetable Planting Times

**THE UNIVERSITY OF ARIZONA** COLLEGE OF AGRICULTURE AND LIFE SCIENCES COOPERATIVE EXTENSION **Yavapai County** Bulletin #51

### Yavapai County Vegetable Planting Dates

Warm Season Crops: bean, cantaloupe, cucumber, corn, eggplant, herbs, okra, pepper, pumpkin, squash, tomato, watermelon  
Cool Season Crops: beet, carrot, chard, collard, leaf lettuce, onion, pea, radish, spinach, turnip

Vegetable	Planting Dates		
	2000 – 3000 Foot Elevation <i>Black Canyon City</i>	3000 – 4500 Foot Elevation <i>Camp Verde, Cottonwood, Sedona, Skull Valley</i>	4500 – 6000 Foot Elevation <i>Chino Valley, Dewey, Prescott, Prescott Valley</i>
Asparagus	Oct 1-Mar 1	Apr 25-Jul 15	May 15-Jul 1
Bean, bush	Mar 1-Apr 1	Apr 25-Jul 15	May 15-Jul 1
Bean, pole	Jul 15-Aug 15	Apr 25-Jul 15	May 25-Jul 1
Bean, lima	Jul 15-Aug 10	May 15-Jul 15	May 1-Jul 15
Bean, edible soy	Mar 1-Apr 1	Mar 1-May 15	Apr 1-Jul 1
Beet	Apr 1-Jun 1	Apr 15-Jul 15	Jun 1-Jul 1
Broccoli	Aug 25-Apr 1	Jul 1-Aug 1	
Brussels sprouts	Jul 25-Oct 1		
	Aug 15-Oct 1		

- **Warm** weather: **after mid-May**
  - Soil temperature greater than 70F
- **Cool** weather: **spring, fall**
  - Soil temperature between 50-60F



# HOW TO GROW IT

## COOL SEASON

### Spring and Fall

## Roots

- Radish, turnip
- Direct seed

## Greens

- Kale, lettuce, mustard, spinach
- Direct seed



# HOW TO GROW IT

## WARM SEASON

### Summer



- **Big 4:** Eggplant, chili peppers, tomatoes, sweet peppers (bells)

- Plants





# HOW TO GROW IT

**WARM SEASON**  
**Summer**



## Cucurbits

- Summer squash, winter squash, cucumbers, watermelon, pumpkin
- Plants or direct seed when soil temp 70F



# TOMATOES

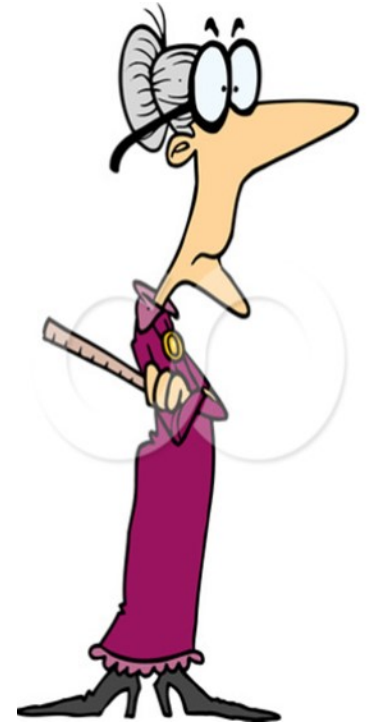
## THE BASICS

### Determinate tomatoes

- Bush type
- Produces main crop then production tapers off
- Earlier production (than indeterminate)

### Indeterminate tomatoes

- Vine type
- Produces over long growing period, until frost







## Heirloom Tomatoes

- Open Pollinated, OP, (natural)
- Little disease resistance
- Mostly vine type
- Can save seeds

## Hybrid Tomatoes

- Controlled pollination to preserve certain traits
- Both bush and vine types
- Resistant to many diseases
- Cannot save seeds



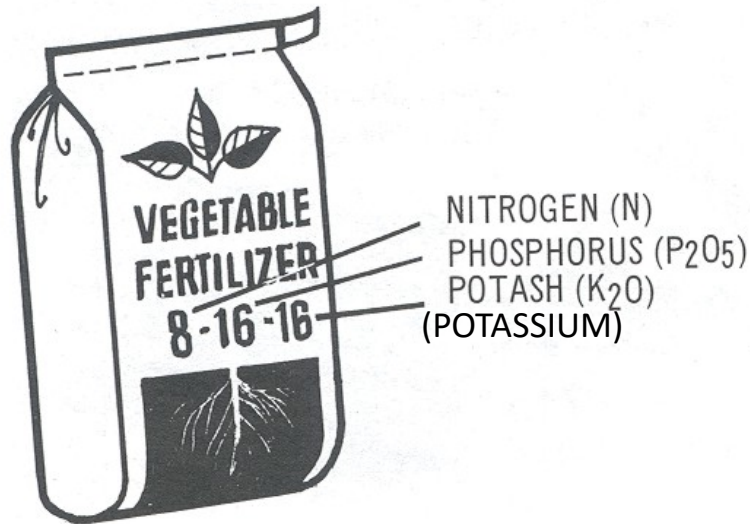
Let's talk  
about  
fertilizers



NITROGEN (N)  
PHOSPHORUS (P<sub>2</sub>O<sub>5</sub>)  
POTASH (K<sub>2</sub>O)  
(POTASSIUM)

**N-P-K is percentage by weight**





Organic and Inorganic  
(manufactured)  
fertilizers are labeled  
the same: NPK

**Nitrogen (N)** healthy foliage.

**Phosphorus (P)** strong roots, make seeds, fruit and flowers, stores energy for photosynthesis, fights disease.

**Potassium (K)** hearty growth, strong stems, helps protect from cold and drought, strengthens root system.





# Organic Fertilizers

Derived from animal or vegetable matter

All are *slow release*

- Blood Meal –(12-0-0 NPK)
- Alfalfa Pellets- (3-2-2 NPK) easy to use
- Composted Manures-Horse (.7-.3-.6)
- Seaweed-liquid, multiple nutrients



# Inorganic Fertilizers

## Mined or man-made

- Timed-release products (osmocote, etc.)
- Urea (46-0-0)
- Triple Super Phosphate (0-45-0)
- Others...



# Tending Your Garden



## PESTS

Pest	Non Chemical	Chemical
Aphid	Soap spray (2)	carbaryl (1)
Thrips	Soap spray, Neem oil	pyrethrums
Spider Mites	Soap spray	malathion
Squash Bugs	HD soap spray (3) Hand pick	None effective
Blister Beetle	HD soap spray	carbaryl (1)

(1) Carbaryl active ingredient in Sevin (Ortho)

(2) Soap spray: one tsp dish detergent to 1 pint water

(3) HD Soap spray: 4 tsp dish detergent to 1 pint water



# Tending Your Garden

## PLANT DISEASES

Disease	Characteristics	Action
Powdery Mildew	White/grey fungus on leaves; stresses plant, inhibits photosynthesis.	Spray with any fungicide (1)
Curly top virus	Spread by beet leaf hopper. Affects tomatoes, beets, cucumber, others . Puckered leaves, browning, kills plant.	Remove infected plants
Fusarium Wilt (tomatoes)	Soil borne fungi. Symptoms similar to Curly leaf virus.	Remove infected plants



**(1) MG Fungicide: 1 tbs baking soda, 1 tbs soap, 1 gal water; do not store**



# Watching Your Garden Grow

- *Mulching* dramatically-reduces water needs
- Water lightly... “1inch rule”
- Fertilize when crops start
  - **Except tomatoes**
- Be ever vigilante for bugs





# Take Away

- Vegetable Gardens need lots of sunlight.
- Mulching can conserve water.
- Fertilizers can be organic or inorganic.
- “Cool” and “Warm” Season crops have different planting times.
- Many garden pests can be controlled with soap spray.



# COMMENTS AND QUESTIONS



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Cooperative Extension  
Yavapai County

