



**ONE SEED PIMA COUNTY  
BLACK RUSSIAN SUNFLOWER**

# Brandon Merchant

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





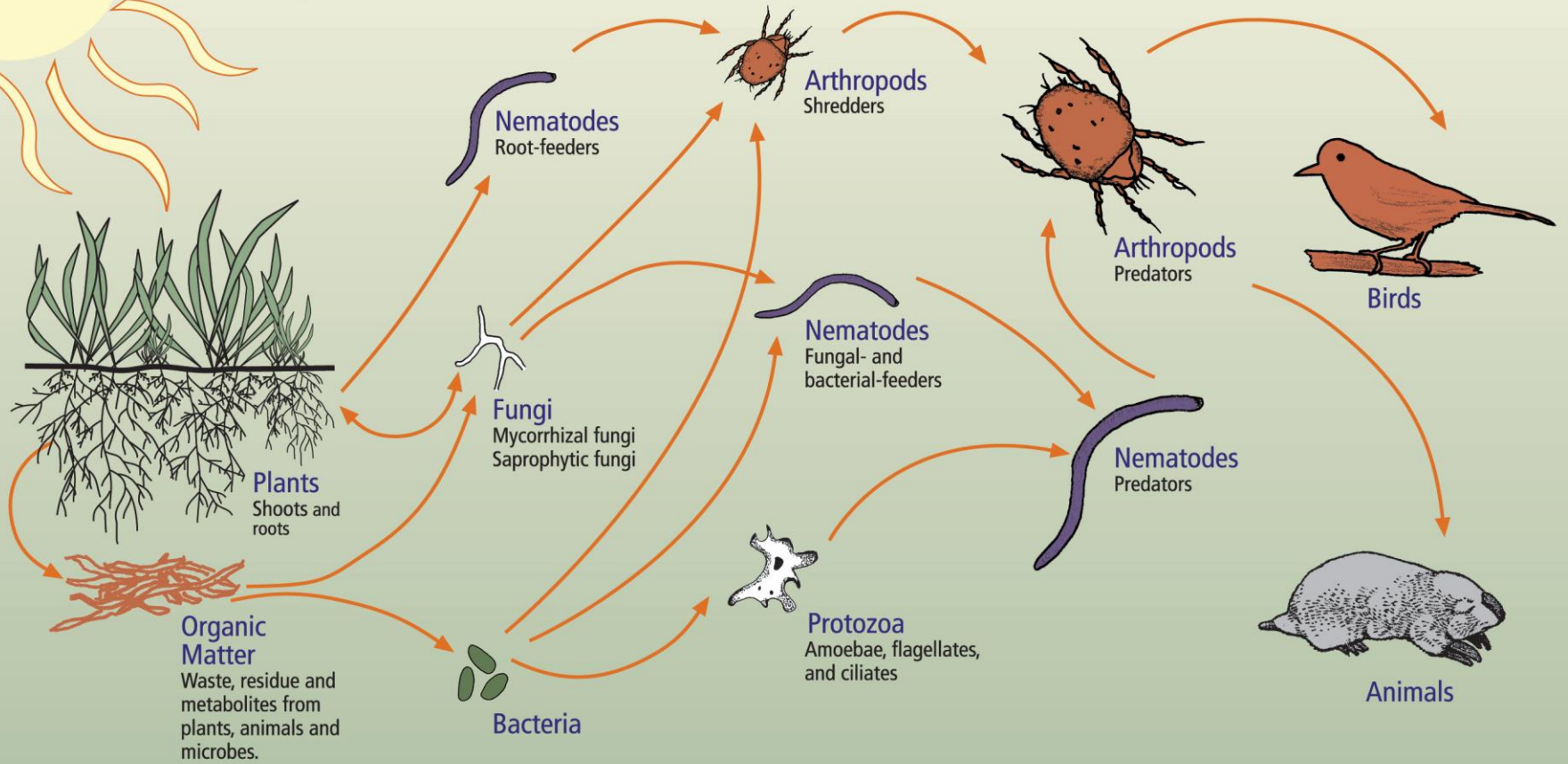
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# Our Philosophy

- 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



# The Soil Food Web



**First trophic level:**  
Photosynthesizers

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

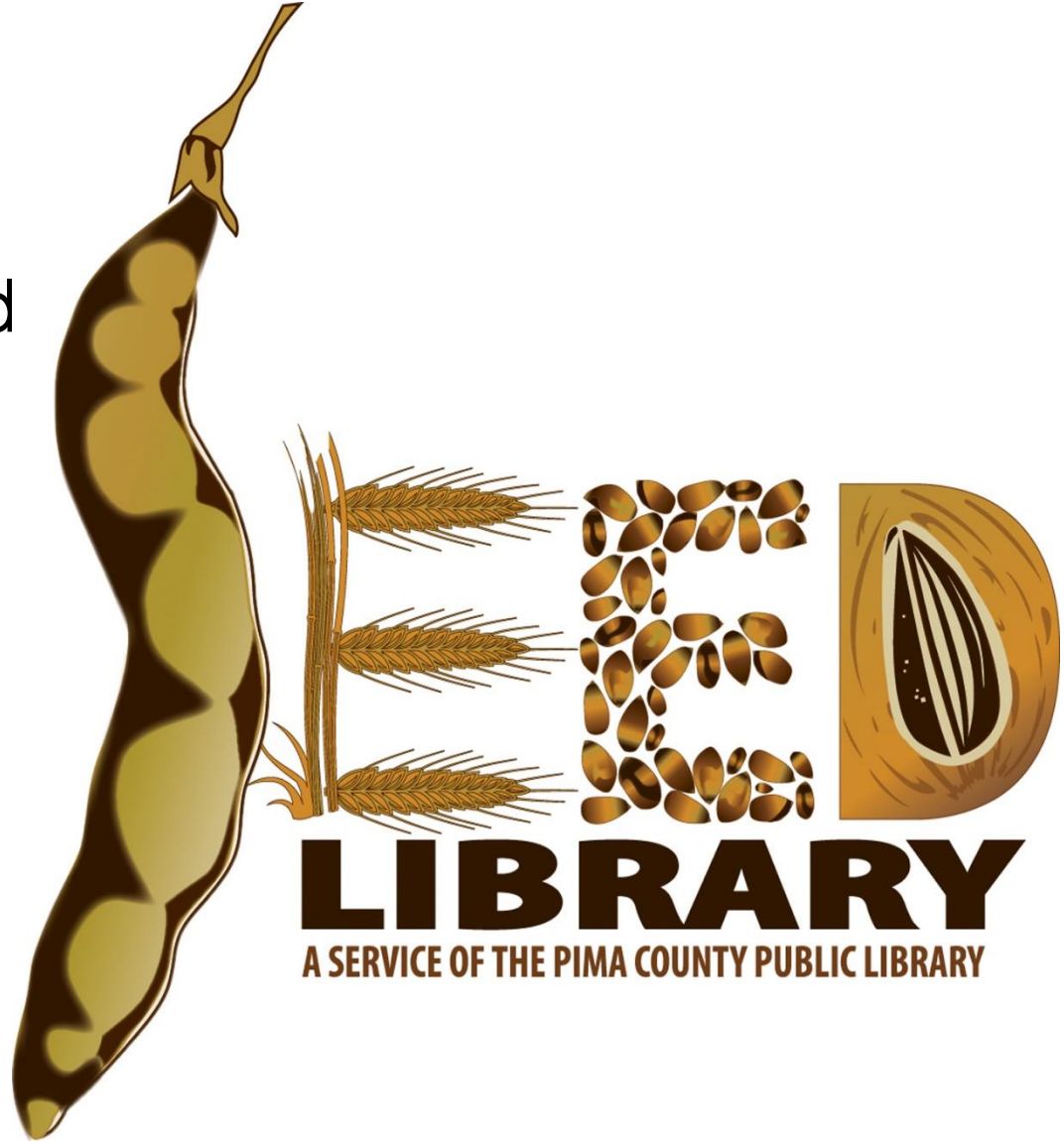
**Third trophic level:**  
Shredders  
Predators  
Grazers

**Fourth trophic level:**  
Higher level predators

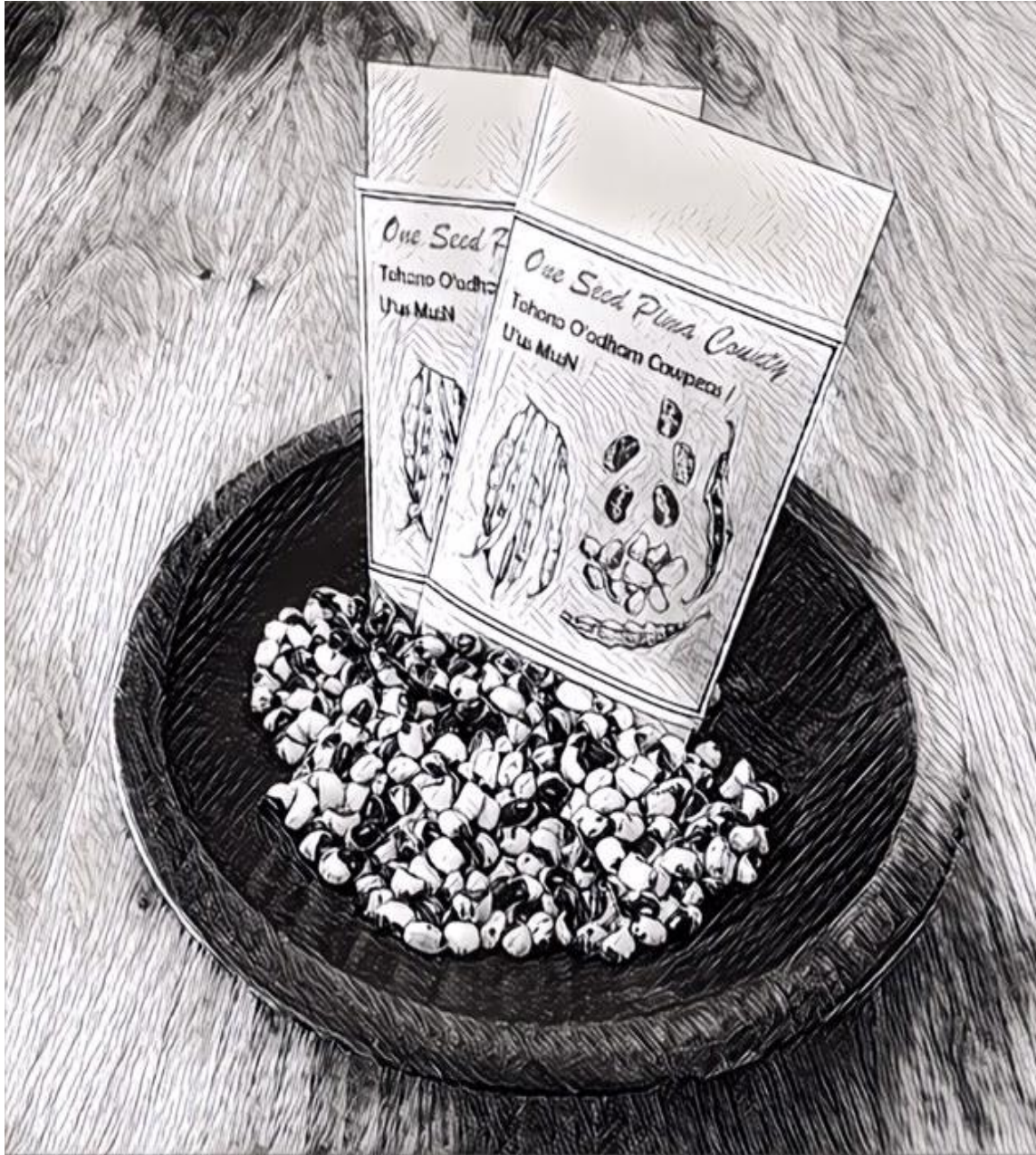
**Fifth and higher trophic levels:**  
Higher level predators

# Pima County Seed Library

- OP and Heirloom Seed Collection
- Borrow and Return Saved Seed
- Better Acclimation
- More Diversity
- Community Education



# One Seed Pima County



- County Wide Seed Saving Initiative
- Community Involvement
- Grow, Harvest, Appreciate

# Our Rich Agricultural History



- 4,000 years of Farming
- Bio-Diverse
- Indigenous Cultures
- UNESCO City of Gastronomy

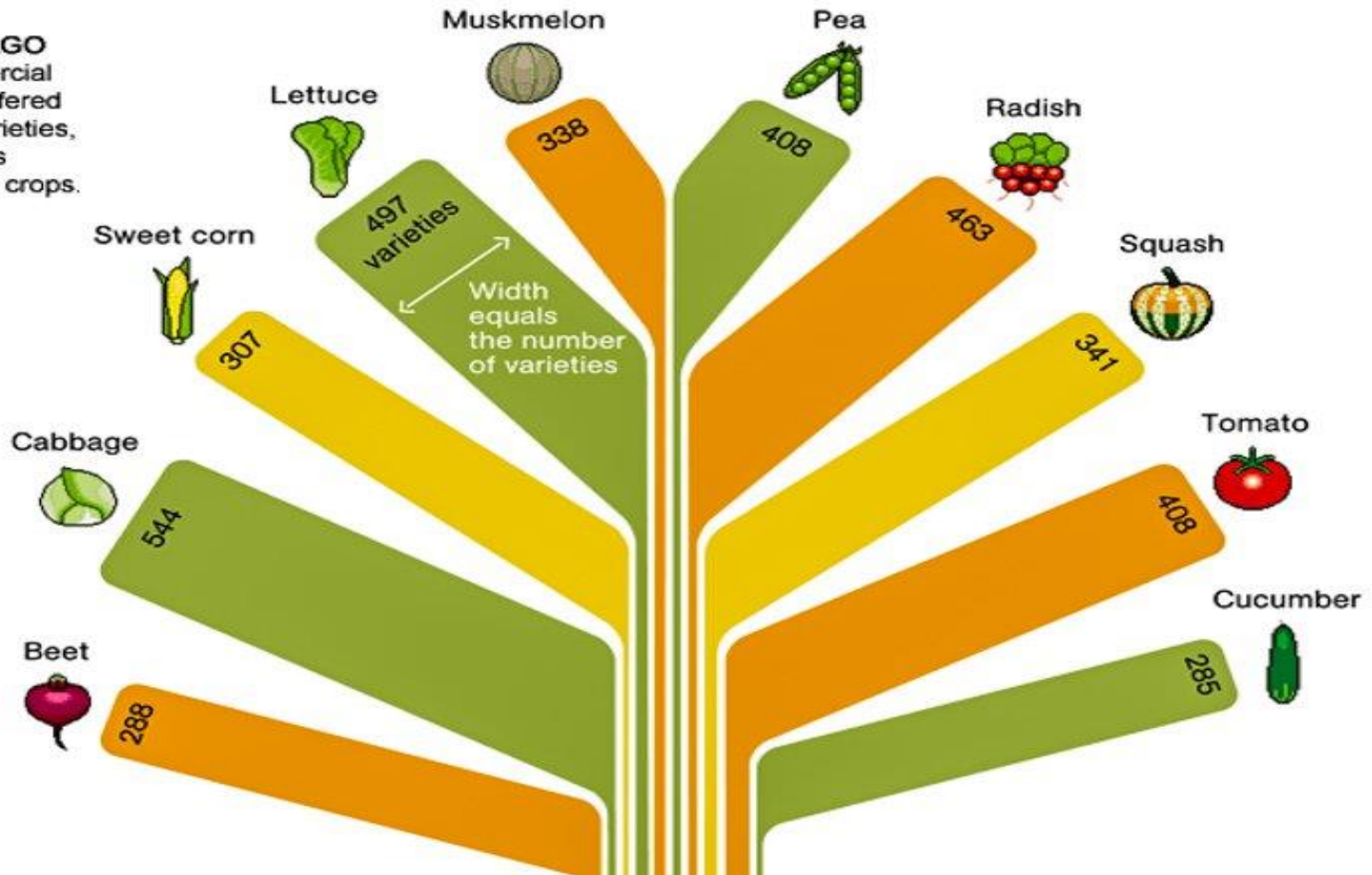


# Why Save Seeds?

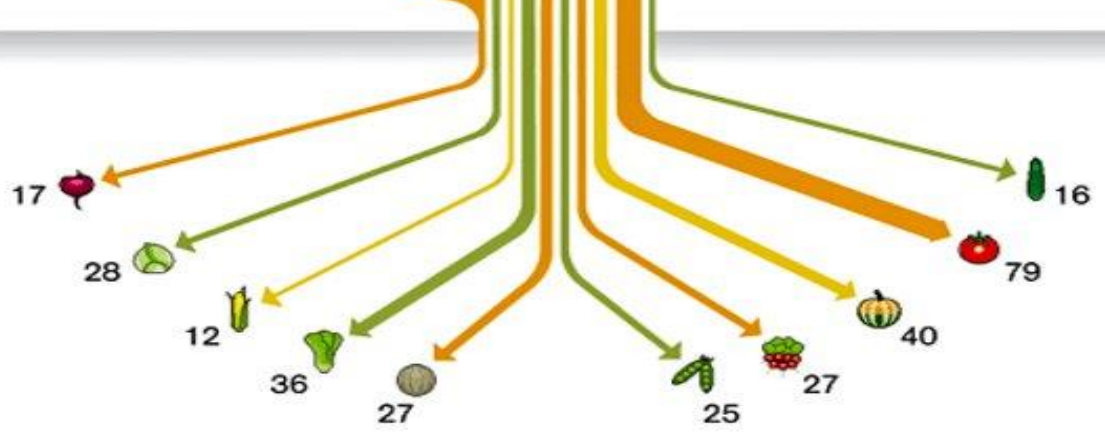
- Traits
- Diversity
- Vigorous Plants
- Save \$\$\$
- Preservation
- It's Fun!



**A CENTURY AGO**  
 In 1903 commercial seed houses offered hundreds of varieties, as shown in this sampling of ten crops.



**80 YEARS LATER**  
 By 1983 few of those varieties were found in the National Seed Storage Laboratory.\*

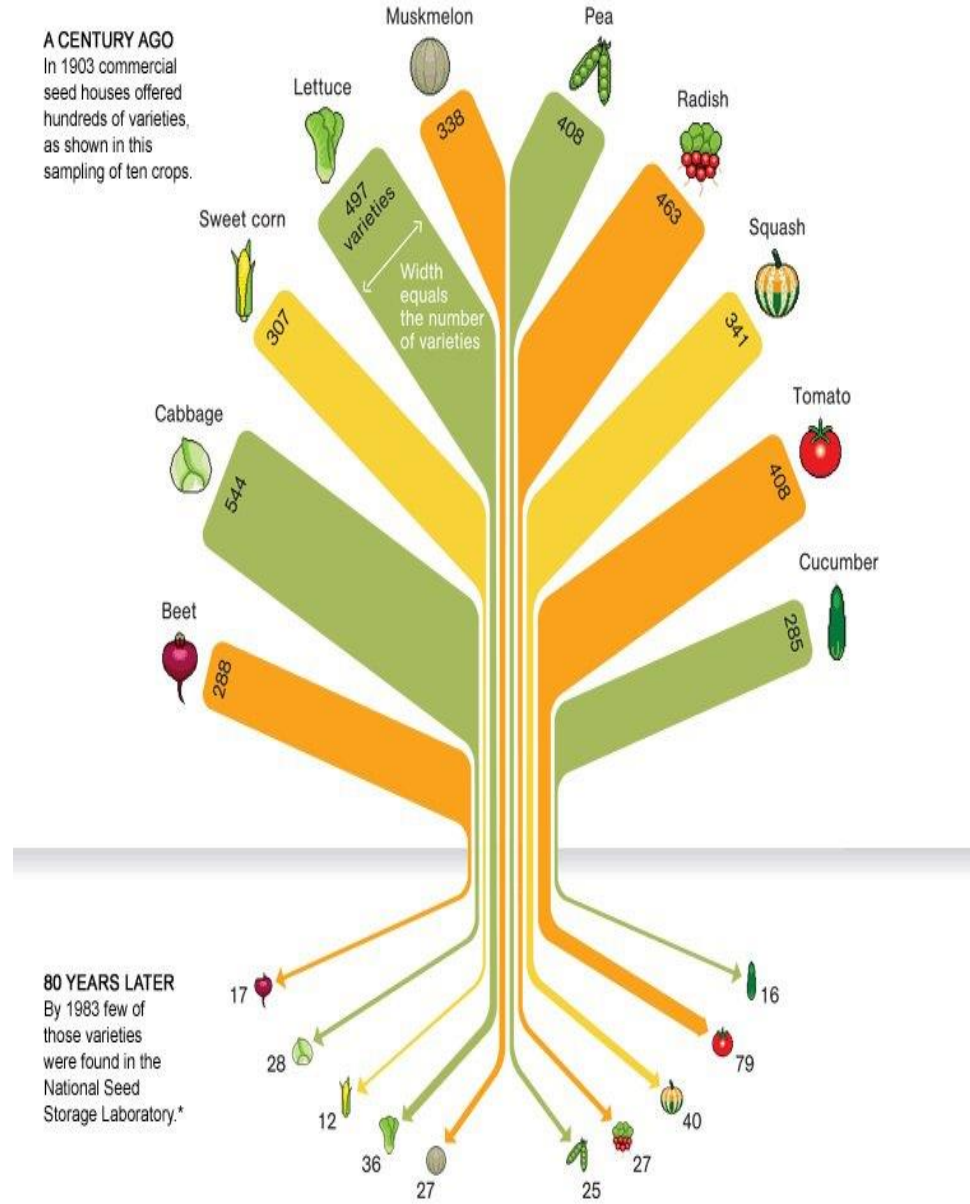


\* CHANGED ITS NAME IN 2001 TO THE NATIONAL CENTER FOR GENETIC RESOURCES PRESERVATION

JOHN TOMANIO, NGM STAFF. FOOD ICONS: QUICKHONEY SOURCE: RURAL ADVANCEMENT FOUNDATION INTERNATIONAL

# Importance of Seed Saving

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SOURCE: RURAL ADVANCEMENT FOUNDATION INTERNATIONAL

- Specific Traits
- Diversity
- Adaptability
- Cost Savings
- Cultural Significance

# How to Save Seed



- Attend Classes
- Read Books
- Start Simple
- Acquire Supplies

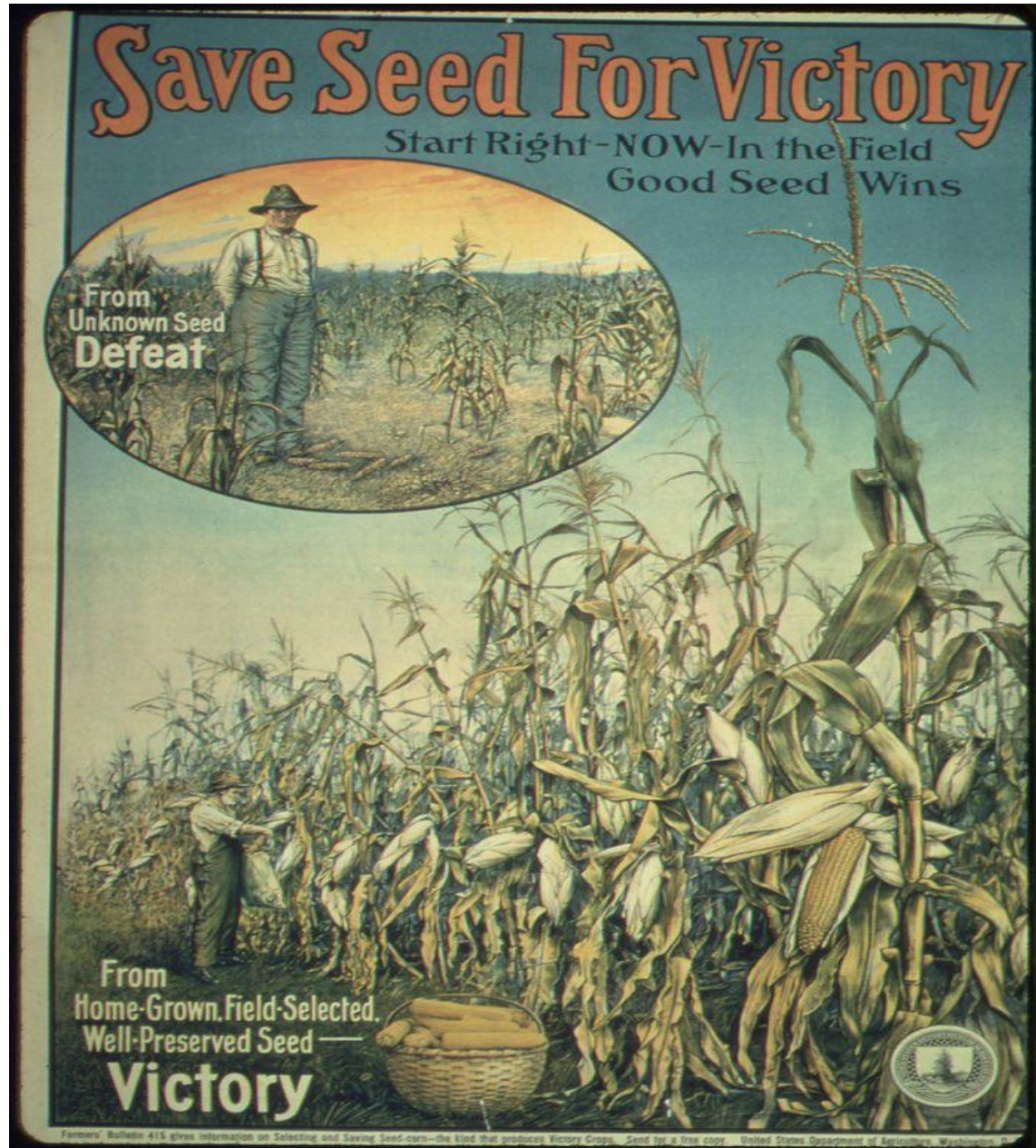
# What is a “seed”?



- **Seeds are hibernating embryos**
  - Seeds are baby plants.
  - It's Alive!
  - Cool, dark, dry
  - **Healthy Seeds = Healthy Plants**

# GROWING CROPS FOR SEED

- **What is Different?**
  - Takes Longer
  - More Space
  - More Tools
  - New Terminology



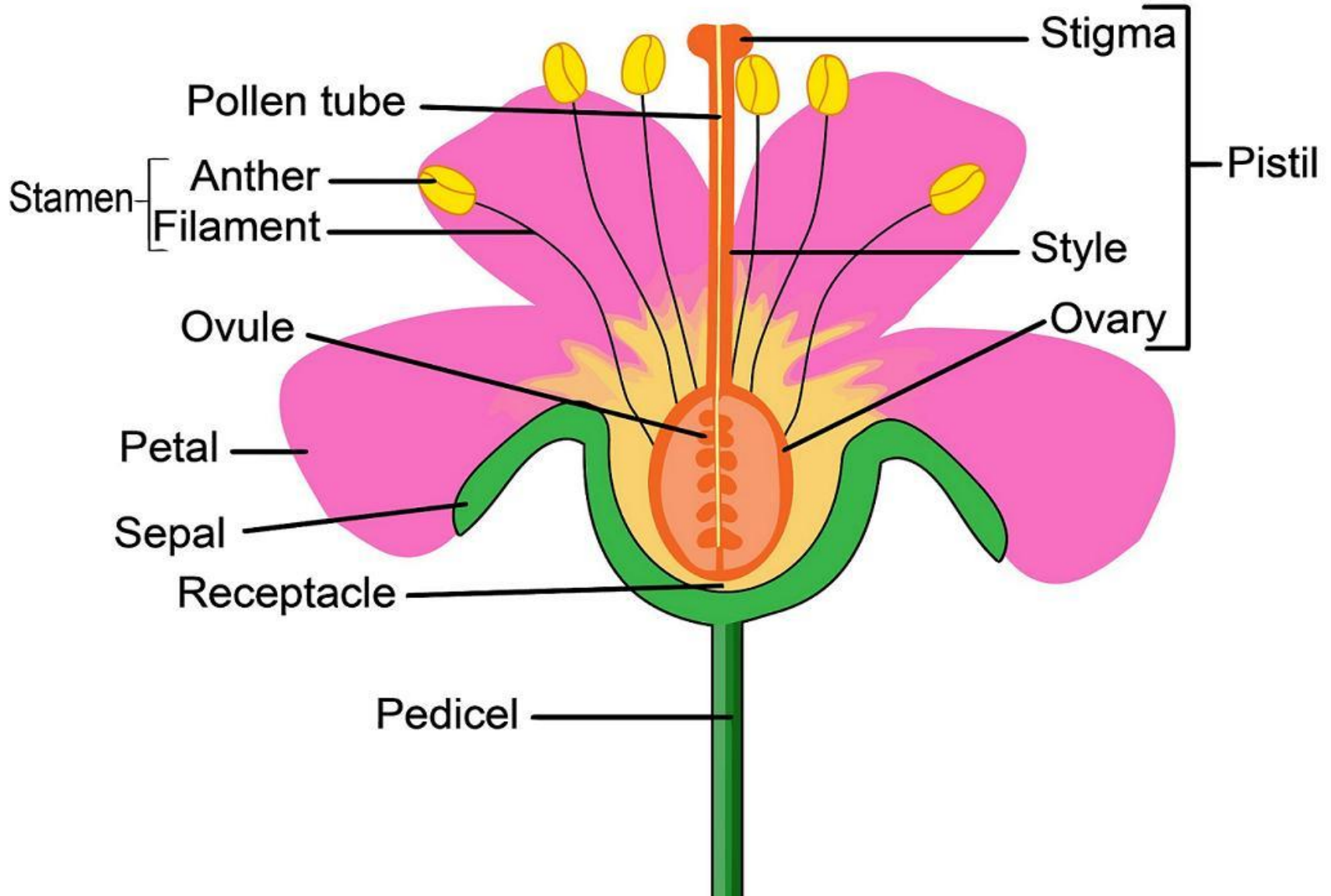
# PLANT LIFE CYCLES



- **Perennial Vs. Annual**

- Annual – Grow and reproduce seed in one year
- Biennial – Take two years to complete their life cycle
- Perennial – Live longer than two years.

# FLOWERS AND POLLINATION

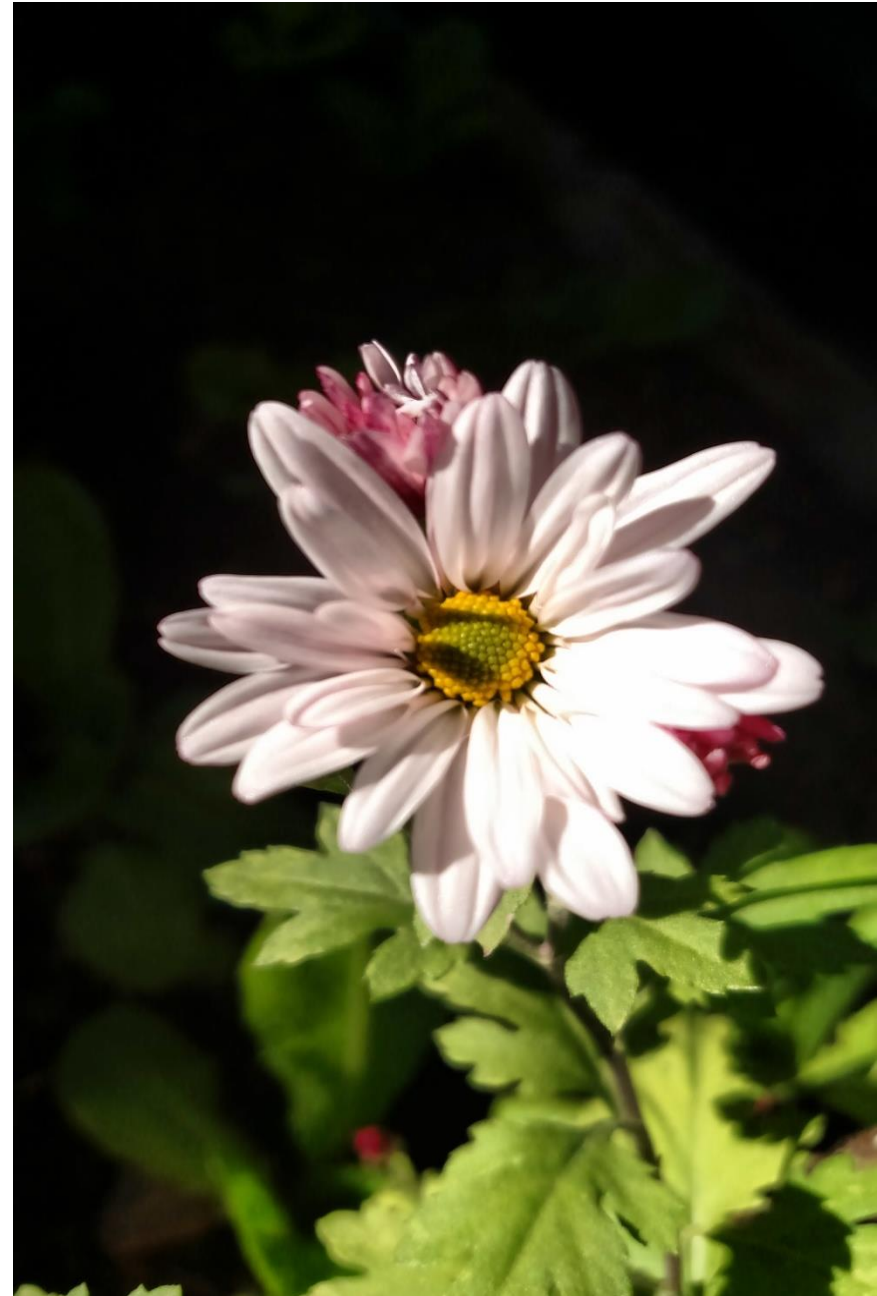




# HOW DOES POLLEN GET AROUND?

## Many Ways Plants Breed:

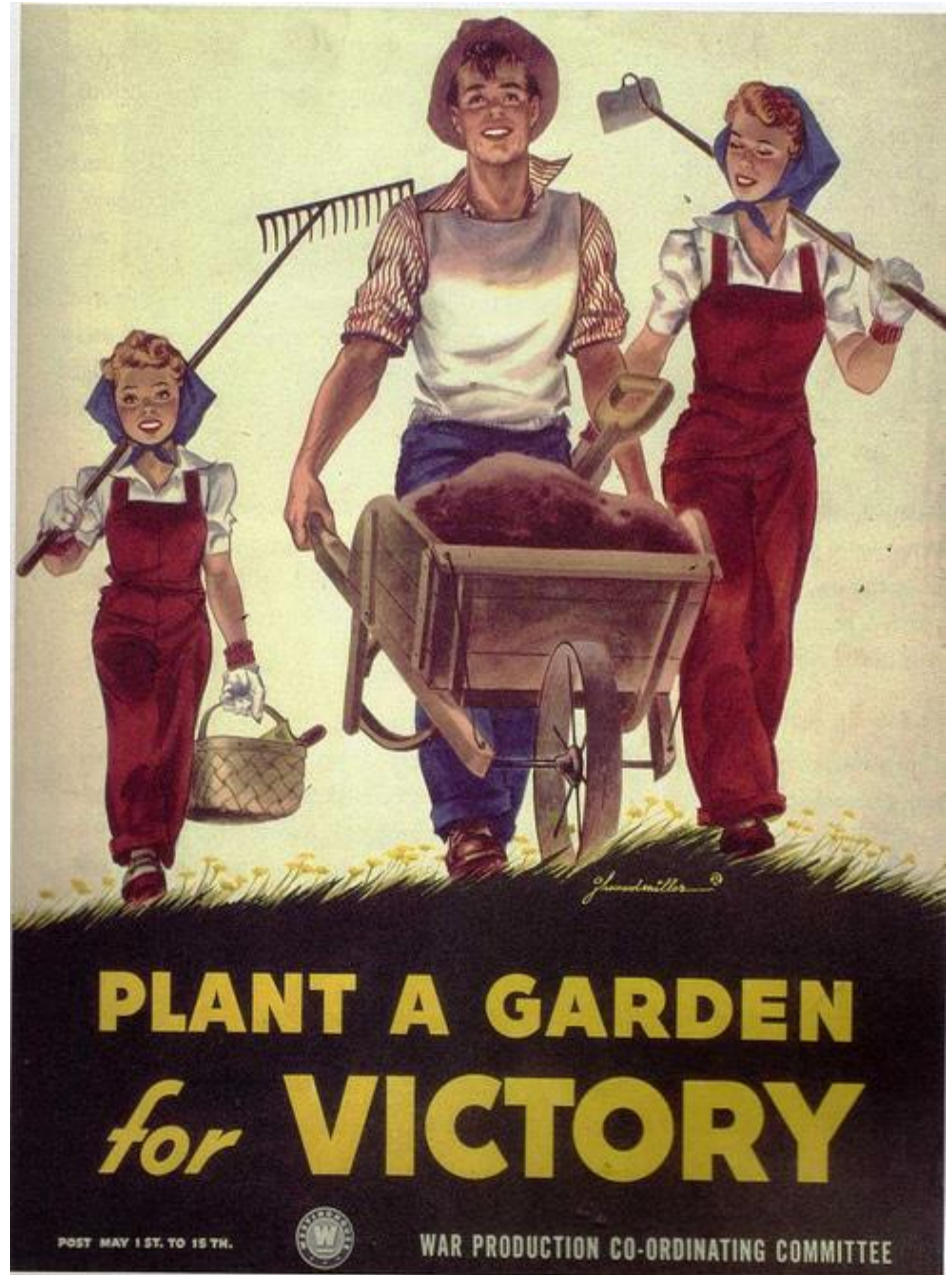
- Wind.
- Insects
- Birds, bats
- Mammals.



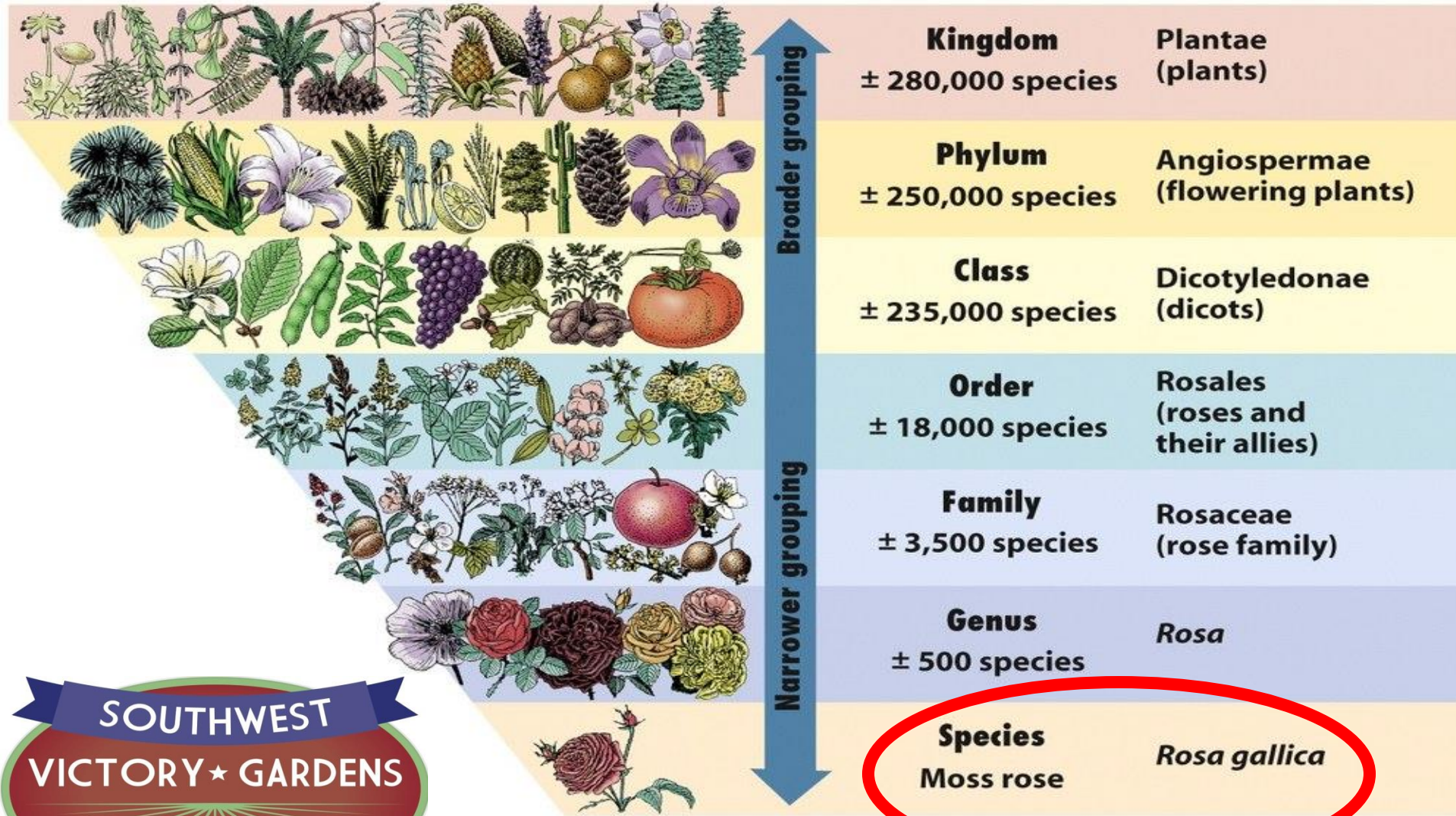
# SOME WORDS TO REMEMBER

## Vocabulary:

- Perfect Flower
- Imperfect Flower
- Self Pollination
- Cross Pollination
- Monoecious
- Dioecious



# LATIN WILL HELP.



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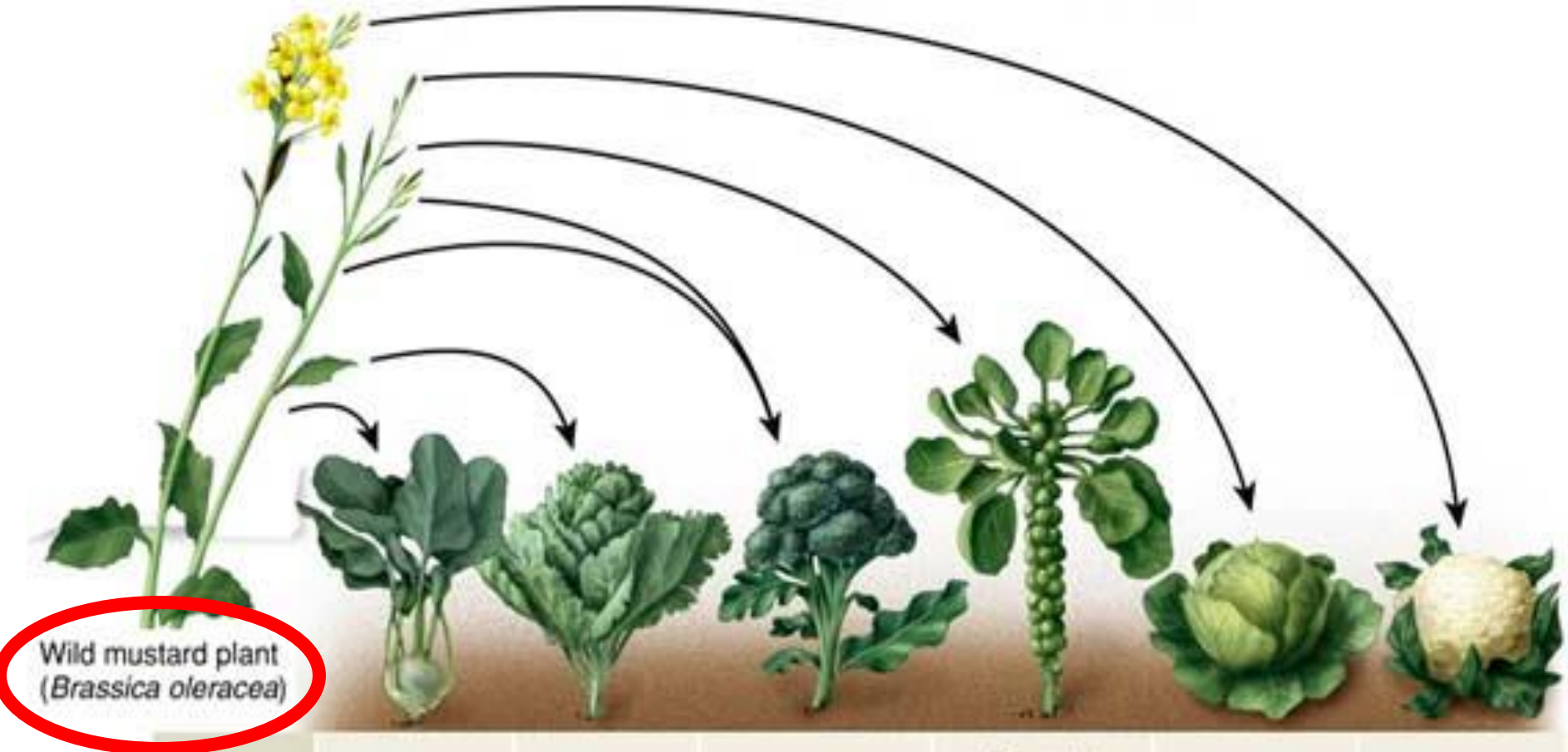
LOCAL STARTS AT HOME

# AVOID UNWANTED CROSS POLLINATION

- Isolation is key
  - Distance
  - Physical Barriers
  - Time
- Hand Pollinate



# AVOID UNWANTED CROSSING



<b>Strain</b>	Kohlrabi	Kale	Broccoli	Brussels sprouts	Cabbage	Cauliflower
<b>Modified trait</b>	Stem	Leaves	Flower buds and stem	Lateral leaf buds	Terminal leaf bud	Flower buds

# CROSSING BETWEEN SPECIES

Cucurbita Species	<u>C. argyosperma</u> Cushaw	<u>C. maxima</u> Hubbard	<u>C. moschata</u> Butternut	<u>C. pepo</u> Pumpkin/Acorn
Argyosperma	X			X
Maxima		X	X	
Moschata		X	X	X
Pepo	X		X	X

# PLANTING FOR SEED SAVING

## The Fruits of Victory



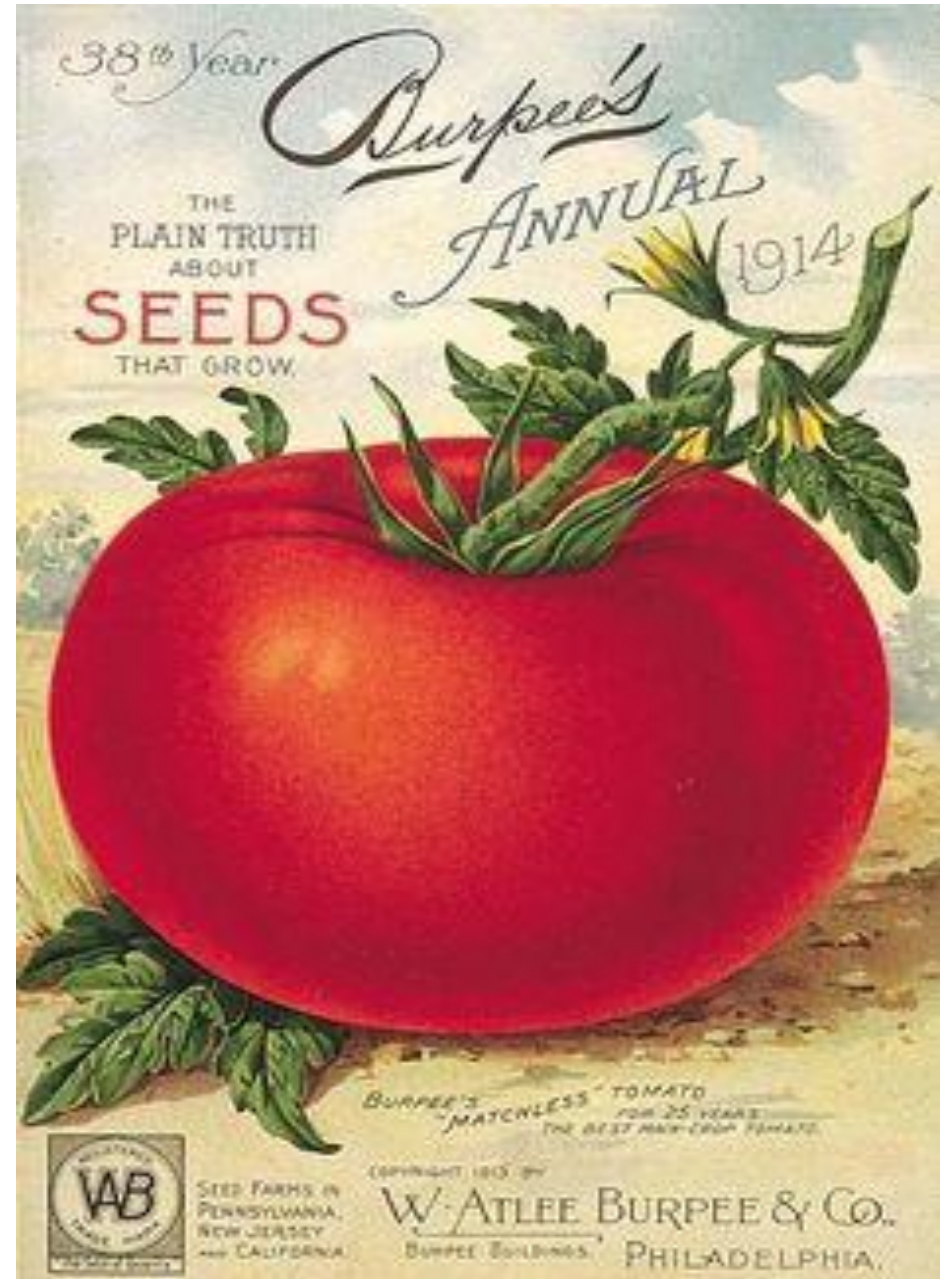
Write for Free Book to  
**National War Garden Commission**  
Washington, D. C.  
Charles Lathrop Pack, President      P.S. Ridsdale, Secretary

## Spacing is Key:

- Requires more space
- Takes longer to mature
- Multiple plants
- Be wary of inbreeding depression

# TRAITS TO LOOK FOR

- Only the strong survive
- Desert adaptation:
  - Early maturity
  - Slow to bolt
  - Drought/Heat tolerance
- Disease resistance
- Taste
- Appearance



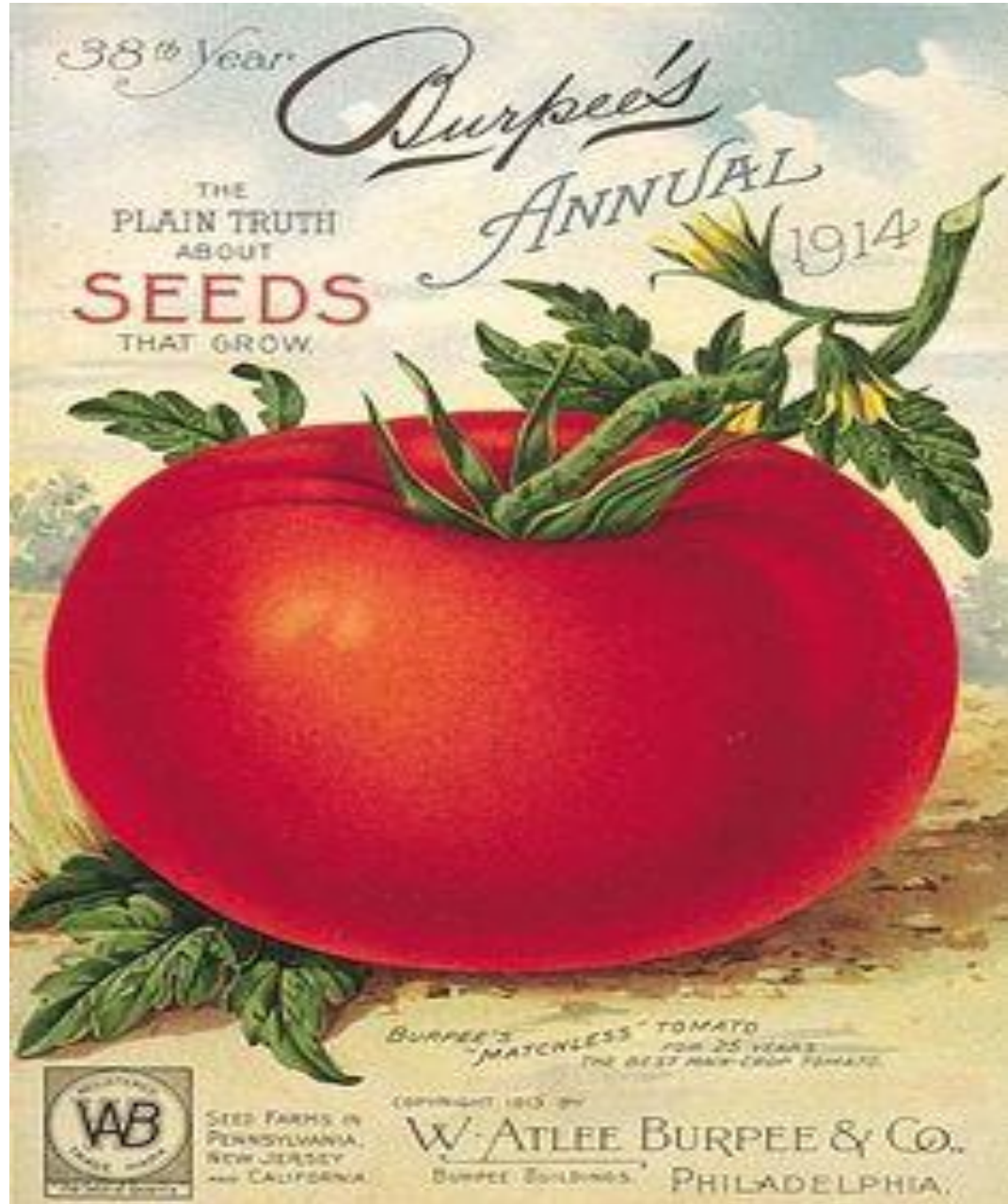


# ANATOMY OF A SEED PACKET



- Common Name
- Scientific Name
- Type
- Season
- Days to Maturity
- Clues
- Expiration Date

# Seed Types



- Heirloom
- Open Pollinated
- Hybrid
- Use Local Sources
- You're not in Kansas anymore!

# ANATOMY OF A SEED PACKET



- Name
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# ANATOMY OF A SEED PACKET



- Name
- Type
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# Harvesting, cleaning, & storing

"We'll have lots to eat this winter, won't we Mother?"

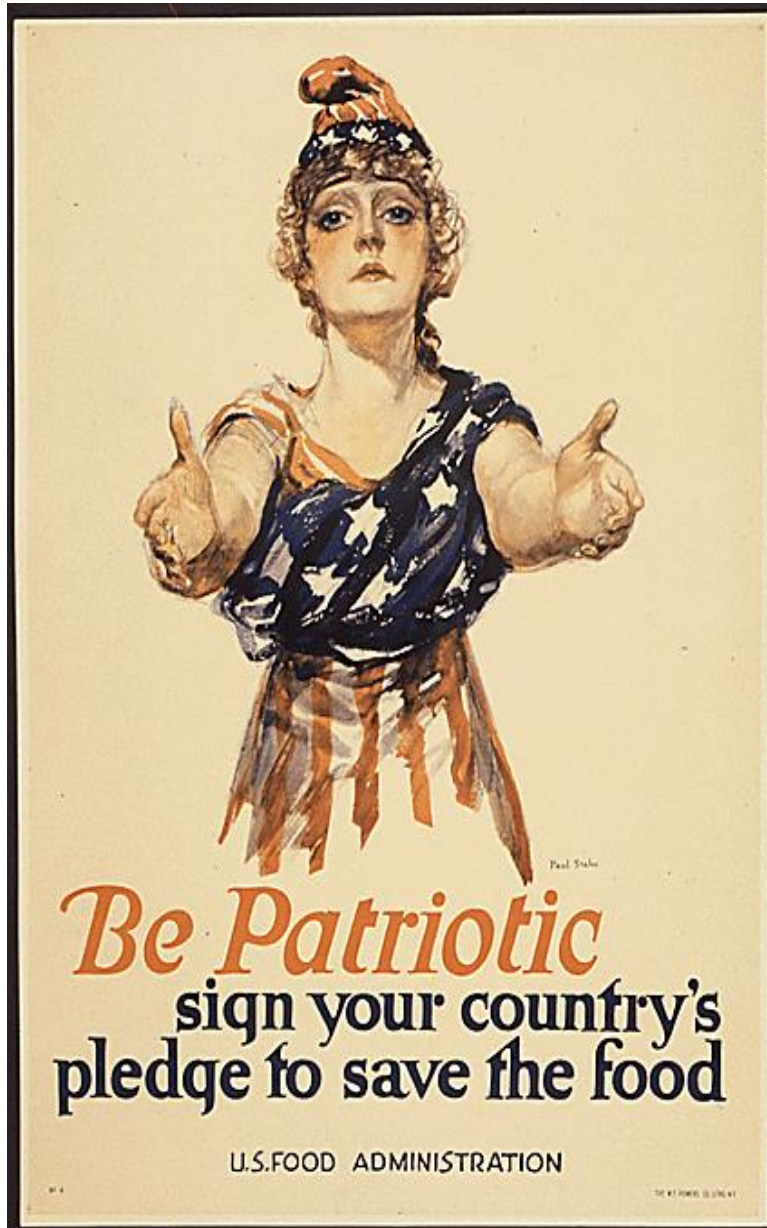


**Grow your own  
Can your own**

## Wait, Wait, Wait:

- Mature plants only
- Takes longer to mature
- New Equipment
- Save and share only the best
- Cool, Dark, and Dry

# Get Started Today!



## The Easiest “seeds” to Save:

- Annuals, perfect flowers, self pollinating:
  - Garlic, I'toi Onion, Legumes, Lettuce, Pea, Tomato, Wheat, and Wildflowers

# Get Started Today!

## A little more effort:

- Annuals, require separation
- Corn, cucumbers and melons, radish, Spinach, pumpkin and squash.



# Get Started Today!



## Most Difficult:

- Biennials and Perennials
  - Beets, cabbage family, carrot, onion, turnip, onion, Swiss chard.



# Sunflowers



- Native to Southwest
- Significant World Crop
- Used as oil Crop since 18<sup>th</sup> Century
- Russian improved oil production post WWII



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, I'tois 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, Mache, 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



# Types of Sunflowers

- Wildflowers
- Oil Varieties
- Eating Varieties



# Companion Planting

- Pollinator Attractor
- Bird Attractor
- Nurse Cropping
- Trap Cropping
- Fertilizer - Biomass



# Harvesting and Saving Seed

- Let Plant Mature
- Cover With Paper Bag
- 6 Plants Minimum
- Save Largest Seed
- Keep 10-20%







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# RESOURCES

- Seed Libraries
- Native Seeds/Search
- Community Food Bank
- Gardening Clubs
- Local Businesses
- Friends and Family







**THANK YOU!**

**[WWW.SOUTHWESTVICTORYGARDENS.COM](http://WWW.SOUTHWESTVICTORYGARDENS.COM)**

**(520) 576-7085**