Saving Seeds

Susan McGhie

© Copyright 2013, 2023

Open Pollinated vs.

- Open Pollinated
 - Holds true to parent plant
 - Can save seeds
 - Often heirloom (over 100 years old cultivar)
- Hybrids
 - Cross between two different variety parents
 - Can not save seeds and expect to germinate or hold true

Life Cycle of plants

- Annuals
 - Bear seed same year planted
- Biennials
 - Bear edible crop first season
 - Bear seed second year planted
 - Flower in spring
 - Seed mid to late summer
- Perennials
 - Roots survive winter
 - Cloning



Annuals

- Annuals
 - * Bean
 - * Broccol
 - * Pea
 - Pepper
 - Pumpkin
 - Most radishes
 - Spinach
 - Squash





- Can produce seed in spring after mild winter (usually not in Utah)
 - Lettuce
 - Wheat

Broccoli



Pumpkin





Spinach



Squash



Biennials

- Pick a mature healthy plant
- Chilling period of 30 to 60 days with temperatures no higher than 40° to 50° degrees F.
- Moderate weather during new spring growth

Biennials

- Brussel sprouts
- Cabbage
- Carrot
- Cauliflower
 - Needs to be dug up and kept in a greenhouse over winter and then replanted in Spring
- Celeriac
- Celery
- Onion

Biennials

- Parsley
- Parsnip
- Rutabaga
- Salsify
- Swiss Chard
- Turnip

Brussel Sprouts



Carrot



Celery





Perennials

- Grown as annuals
 - Tomatoes
 - Peppers
 - Lima beans
- Asparagus
- Rhubarb
- Chive

Pollination

- Self-pollination
 - Perfect flowers (both male and female parts)
- Cross-pollination (need a second plant)
 - Wind
 - Insects usually bees
- Imperfect Flowers
 - Staminate (male flowers) functional stamens and nonfunctional pistils
 - Pistillate (female flowers) functional pistils and nonfunctional stamens

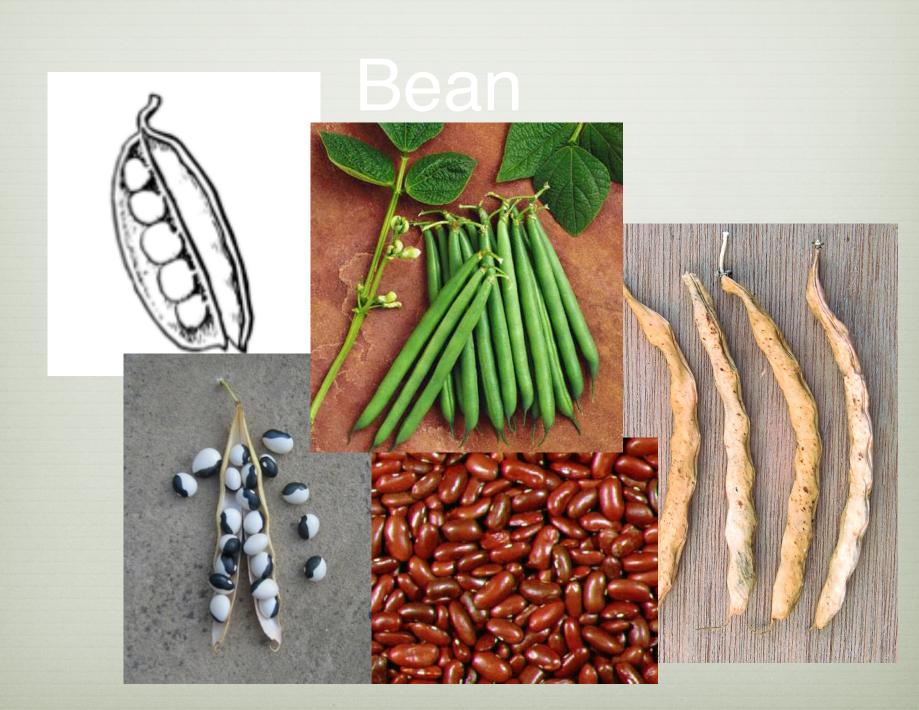
Self-pollination

(start with these)

- Pea
- Snap bean
- Soybean
- Cowpea
- Endive
- Oats
- Tomato

- Pepper (Chili's)
- Wheat
- Lettuce
- Clarkia
- Sweet Pea
- Snapdragon





Pepper (Chili's)



Cross-pollination

- Vegetables
 - * Bean
 - * Carrot
 - Celery
 - * Eggplant
 - * Radish
 - SweetPotato
 - Tomato

- Pepper
- Okra
- Orchard
 - Apple
 - * Peach
 - Pear
 - Plum

- Flowers
 - SweetAlyssum
 - Nicotiana
 - Petunia
 - Salvia
 - Snapdragon

Imperfect Flowers

- Monoecious Plant
 - Sweet corn
 - * Cucumber
 - * Cantaloupe
 - * Squash
 - * Pumpkin
 - * Watermelon
 - Chestnuts
 - Filberts
 - Pecans

- Walnuts
- Diocecious Plants (flowers on different plants)
 - * Holly
 - Asparagus
 - * Date
 - * Persimmon
 - Spinach (male & female plants and plants with both male and female flowers)

Selecting Plants

- Look for healthy plants vigor
- Save more than one to have larger gene pool
- Flavor
- Yield
- Color
- * Size
- Insect & disease resistance

Collecting Seeds

- Timing
 - Ripe
 - But before seeds scatter
- Fleshy plants
 - Tomatoes, eggplants, peppers
 - Little over ripe but not too ripe
 - Don't let dry over seed
- Seed Crops
 - Collect almost anytime, let dry out
- Seed heads that scatter
 - Collect daily as seeds mature or place breathable bag over head

Cleome



Drying Seeds

- Separate seed from pulp
 - Tomatoes
 - * Peppers
 - Wash off seeds thoroughly
 - Squash
 - Melons
 - Cucumbers
- Let dry for 3 to 5 days

Drying Seeds

- Dry pods don't be too rough
 - Peas
 - Beans
 - Soybeans
 - Lima beans
- Dry seeds on plant shake through screen to sift out chaff
 - Sunflower
 - Dill
 - Lettuce

Drying Seeds

- Lay on paper towel or newspaper
- Turn over after a day or two
- Dry enough in Utah to not need to dry in sun, but can place in sun for a day or two

Tomato Seeds

- Have a hard coat on them that has to removed or will not germinate
- Need to soak seeds for 3 to 4 days?
- Until they ferment a little and good seeds sink to bottom, bad seeds and pulp float to top
- This helps control bacterial canker and help seeds germinate later

Tomato



Tomato Seed Coat



Tomato Soaking



Tomato seeds after



Tomato seeds over

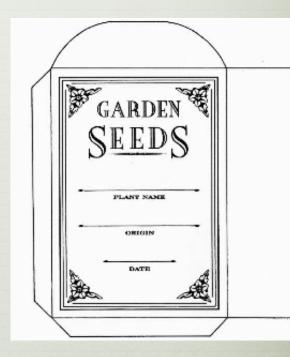


Tomato Seeds Ready



Storing Seeds

- Seeds are alive need oxygen
- Protect from moisture and heat
- Moisture
 - Can or jar best
 - Use silica gel to keep moisture down
 - * Keep seeds in well marked envelope
 - http://contentinacottage.blogspot.com/2008/08/flowersand-seed-packet-pattern.html
- Temperature



Seed Life

Vegetable	Life Cycle	Viability-yrs.	Pollinated?	Isolation?
Asparagus	Perennial	3	Insect	Yes
Bean	Annual	3	Self	Limited
Beet	Biennial	4	Wind	Yes
Broccoli	Annual	3-5	Insect	Yes
Brussels Sprouts	Biennial	4-5	Insect	Yes
Cabbage	Biennial	4-5	Insect	Yes
Cardoon	Biennial	4-5	Insect	Yes
Carrot	Biennial	3	Insect	Yes
Cauliflower	Biennial	4-5	Insect	Yes
Celeriac	Biennial	3-5	Insect	Yes
Celery	Biennial	3-5	Insect	Yes
Chinese	Annual	3-5	Insect	Yes

Vegetable	Life Cycle	Viability-yrs.	Pollinated?	Isolation?
Chive	Perennial	2	Insect	Yes
Corn, Sweet	Annual	1-2	Wind	Yes
Cowpea	Annual	3	Self	Limited
Cucumber	Annual	5	Insect	Yes
Dandelion	Perennial	2		
Eggplant	Annual	4-5	Self	Limited
Garlic	Annual	1	N/A	No
Horseradish	Perennial		N/A	No
Endive				
Fennel	Perennial	4	Insect	Yes
Jerusalem	Perennial		N/A	No

Vegetable	Life Cycle	Viability-yrs.	Pollinated	Isolation?
Kale	Biennial	4-5	Insect	Yes
Kohlrabi	Biennial	3-5	Insect	Yes
Leek	Biennial	2-3	Insect	Yes
Lettuce	Annual	5-6	Self	Limited
Lima Bean	Annual	3	Self	Limited
Muskmelon	Annual	5	Insect	Yes
Mustard	?	4		
New Zealand	Annual	3-5	Insect	Yes
Okra	Annual	2	Self	Limited
Onion	Biennial	1-2	Insect	Yes
Parsley	Biennial	1-2	Insect	Yes

Vegetable	Life Cycle	Viability-yrs.	Pollinated?	Isolation?
Parsnip	Biennial	1-2	Insect	Yes
Pea	Annual	3	Self	Limited
Peanut	Annual	1-2	Self	Limited
Pepper	Annual	2-4	Self	Limited
Popcorn	Annual	2	Wind	Yes
Pumpkin	Annual	4-5	Insect	Yes
Radish	Annual	5	Insect	Yes
Rhubarb	Perennial		*Division	No
Roselle		3		
Rutabaga	Biennial	4-5	Insect	Yes
Salsify	Biennial	1-2	Self	No
Sorrel		4		

Vegetable	Life Cycle	Viability-yrs.	Pollinated?	Isolation?
Soybean	Annual	3	Self	Limited
Southern Pea		3		
Spinach	Annual	3	Self	Limited
Squash	Annual	4-5	Insect	Yes
Swiss Chard	Biennial	4	Wind	Yes
Tomato	Annual	4	Self	Limited
Turnip	Annual	4-5	Insect	Yes
Watermelon	Annual	4-5	Insect	Yes

Sources
Susan McGhie
Savings Seeds by Marc Rogers
Knott's Handbook for Vegetable Growers

Open Pollinated for Utah County

- Asparagus (Mary Washington)
- Beans (Blue Lake)
- Beet (Detroit Dark Red, Detroit Supreme)
- Broccoli (DiCicco, Waltham 29)
- Carrot (Danvers Half Long, Scarlet Nantes, Thumbelina)
- Corn, Sweet (Golden Bantam)
- Cucumber (Lemon, Marketmore 76, Wisconsin)
- Lettuce, Leaf (Black Seeded Simpson, Oak leaf, Red Sails)

Open Pollinated for Utah County

- Lettuce, Romaine (Barcarolle, Cimarron, Parris Island Cos)
- Melon (Hales Best Jumbo, Crenshaw, Honeydew)
- Onions, Bunching (Evergreen White Bunching)
- Onions (Utah Sweet Spanish)
- Peas (Little Marvel, Lincoln)
- Peas, Edible Pod (Sugar Snap, Oregon Sugar Pod II)

Open Pollinated for Utah County

- Pumpkins (Big Max, Jack-O'-Lantern)
- Radish (Champion)
- Tomatoes
 - Early (Oregon Spring)
 - Paste (Roma VF, San Marzano)
 - * Beefsteak (Beefsteak, Brandywine)
 - Cherry (Cherry-Red)
- Watermelons (Crimson Sweet)
- Squash (Crookneck-Early Yellow Summer, Waltham Butternut)
- Swiss Chard (Bloomsdale Long Standing)
- Zucchini (Black Beauty)

Compiled by Susan McGhie

Seed Savers Exchange



http://forums.seedsavers.org/

Mountain Valley Seeds



Canned Seeds

http://www.mvseeds.com/gardencan.html

Seed saving instructions

http://www.mvseeds.com/ CannedGardenSeeds%20Instructions.pdf

Preparedness Seeds



http://www.preparednessseeds.com/store/heirloomseeds/heirloom-seeds/

Seed Saving Site

- International Seed Saving Institute
- They have lots of information on seed saving
- Website
 - http://www.seedsave.org/issi/issi_904.html

Hope you enjoyed

The End