

Kitchen Botany

11 Plant Families for Food & Seed Saving

1. Nightshade Family ~Solanaceae

Characteristics:: Bisexual regular flowers. :5 united petals, 5 united sepals, 5 stamens.. Chemically all plants have varying levels of alkaloids and range in toxicity from mildly to very toxic.

Seed Saving: Most varieties are self-pollinating and can be saved with little or no isolation

Tomato – Squeeze seeds out of ripe fruit. Let ferment overnight. Rinse and dry on paper

Tomatillo, - Same as tomato

Potato – Propagated by tuber. Cut potatoes up and plant into ground

Pepper (capsicum) - Scrape seeds from ripe fruit, let dry.

Eggplant, - Wait until fruit turns color (usu yellow). Scoop out and separate seeds from flesh. Let dry

Tobacco (nicotiana)

Ground Cherry - Same as Tomatillo

Datura (Jimson Weed) – Collect dry seed pods before they burst open.

2. Gourd Family ~ Cucurbitaceae

Characteristics: Separate male & female flowers on the same plant. Funnel shaped flowers, often yellow or gold, 5 separate sepals and 5 petals united at their base, Male flowers usu have 5 stamens and large pollen grains. Female flowers sit atop a visable ovary.

Seed Saving:: Cucurbits in the same species can cross easily and require isolation or hand-pollination. Plants only one from of each species (see below) or hand pollinate.. To save seed wait until fruit has changed color. Scoop out and dry.

Cucumber

Squash

c. maxima: ~ banana, buttercup, hubbard, turban

c.mixta – cushaw, some gourds

moschata – butternut,

pepo – crookneck,, zucchini,spaheghetti

ficifolia - chayote

Melon (except for watermelon) can cross with eachother. Seeds are mature when fruit is ready to eat.

Lufa

Gourd

3. Mustard Family~ Brassicaceae

Characteristics:: 4 petals arranged in an X or H pattern. Often clumped along a tall stalk. Beloved by bees.

Seed Saving:Many kitchen varieties are actually in the same species and require isolation and or hand pollination

Broccoli

Cauliflower

Kale

Collard Green

Mustard

Cress

Arugula

Nasturtium

4. Pea Family~ Leguminose (formerly Fabaceae)

Characteristics::Irregular shaped, 5-petaled flowers in a “banner, wing and keel” formation (2 up, 3 down). usually 10 stamens.

Seed Saving:: Do not generally outcross. EASY to save, Just let dry on vine and shell when dry.

Bean: pole bean, bush bean, fava, lima, garbanzo, soy, etc

Pea

Peanut

5. Carrot Family~Umbelliferae (formerly Apiaceae)

Characteristics:: Flowers in compound umbel formation (many flowers grouped together in an umbrella shape)

Individual small flowers have 5 sepals, 5 petals, 5 stamens.

Seed Saving:: Plants in this family easily outcross with wild relatives, making them inedible within a few generations.

Plants need isolation or hand pollination as well as 100 plants or more to ensure good pollination and diversity.

Carrot

Parsnip

Celery

Kitchen herbs: Coriander, Dill, Fennel, Caraway, Chervil, Parsley

Medicinal Herbs: Angelica, Spikenard, Osha

6. Goosefoot Family ~ Chenopodiaceae

Characteristics:: Beet and chard seeds are aggregate containing several seeds in an irregular woody clump. Other member have spikes of single seeds.

Seed Saving: Wind pollinated and pollen can travel up to 5 miles. Isolation by distance or bagging required for seed purity. Seed is harvested when dry.

Beet

Chard

Spinach

7. Onion Family ~ Amaryllidaceae

Characteristics: All are monocots with a strong spicy odor, round hollow leaves or flat leaves with a strong central fold, Flowers often clustered in a sphere with a central joining point.

Seed Saving: Clumping and can be separated.. Some are top-setting and produce viable bulbils at the top of their flower stalks.. Many can be propagated vegetatively by bulb. Seed saving from flowers require isolation or hand-pollination.

Onion

Leek

Garlic

Chives

Shallots

Egyptian Walking Onions

8. Grass Family ~ Poaceae

Characteristics:: Monocot, small indistinct flowers, wind pollinated

Seed saving: need isolation of 1-2 miles or bagging and hand pollination. Also need 100 or more individual plants to ensure genetic diversity and vigor.

Corn

Wheat, oats, barley, rye, rice, etc.

Bamboo

9. Sunflower Family ~ Compositaeceae (formerly Asteraceae)

Characteristics:: composite flowers (many smaller flowers clustered together) comprising disk flowers and strap or ray flowers (look like petals)

Seed Saving:: EASY self-pollinating and easy to save. Allow seeds to dry on plant. Harvest and separate from chaff.

Lettuce

Chicory

Endive

Artichoke, cardoon

Salsify

A host of garden flowers including cosmos, bachelor's buttons, calendula, scabiosa,

Yarrow

Chamomile

10. Mint Family ~ Labiatae(formerly Lamiaceae)

Characteristics:: Most plants have square stems and alternating leaves, usually aromatic. Flowers usually small, tubular and irregularly shaped. 5 united petals 2 up 3 down, 4 stamens.

Seed Saving: Require insects for pollination but 150 feet will ensure purity. In the home garden most seeds can be safely saved just so.

Culinary: Mint, Rosemary, Thyme, Oregano, Culinary Sage, Basil

Medicinal: Pennyroyal, Self-heal, Skullcap, Woody betony, Anise Hyysop,

11. Rose Family - Roseaceae

Characteristics:: All plants have flower with 5 petals, 5 sepals and numerous stamens.

Seed Saving: Most fruit plants are propagated by grafting (in the case of tree fruits) or suckers/roots(in the case of berries):

Strawberry ~, clumping varieties can be divided, runners can be rooted.

Raspberry ~ suckers or root starts can be dug up and propagated

Blackberry ~ same as raspberry

Peach, plum, pear, apple, apricot – al can be started from seed but do not grow true, most are grafted