

BOTANICAL FAMILIES OF GARDEN CROPS

The Mustard Family -- *Brassicaceae* (old name = Cruciferae)

Broccoli, cabbage, cauliflower, kale, Brussels sprouts, kohlrabi, and collards are all the same *species* (*Brassica oleracea*). Other members of the family include Chinese cabbage, bok choy, arugula, mustard, turnips, rutabagas, radishes, horseradish, canola, and watercress.

May be "hot" flavored in a mustardy way. Flowers easily identifiable (four petals, six stamens, two of the six stamens recessed). Insect pollinated. Many species attract cabbage moths/cabbage loopers. Frequently heavy feeds. Not self-pollinating, and since so many types are in the same species, it's easy to get 'em cross-pollinated if care isn't taken.

Brassicas are some of the very quickest seeds to germinate and emerge -- I've seen arugula come up in four days.

The Nightshade Family -- *Solanaceae*

tomatoes, peppers, potatoes, eggplants, tomatillos

Common sets of diseases and pests. Should definitely be rotated year to year (so should everything, but especially the nightshades). Many poisonous species. Generally warm season crops, with the exception of potatoes. Many tomatoes are self-pollinating, making them easy seeds to save with less caution than some other crops.

The Parsley Family -- *Apiaceae* (old name = Umbelliferae)

carrots, parsley, dill, cilantro, celery, celeriac, parsnip, lovage, fennel, angelica, chervil

Lots of roots and herbs. Tend to make small flowers, which are attractive to beneficial insects. Flowers occur in clusters called *umbels*, which make this family fairly easy to identify. **Warning:** poison hemlock is in this family. Never eat plants from this family unless you're sure what they are.

Many species in the parsley family have very short seed lives. Buying fresh seed is probably more important for this family than for others.

The Beet Family -- *Chenopodiaceae*

spinach, beets, chard, sugar beets, quinoa, orach, lamb's quarters (which is also a common weed)

Beets, sugar beets, and chard are all the same species, and may have problems with leaf miners. Spinach doesn't tolerate much heat -- try orach, beets, or chard if you want spinchy greens well into the summer. Typically taprooted, the chenopods are generally sown directly rather than transplanted, but I've had good luck transplanting chard. Spinach and chard may be overwintered with protection, and spinach is typically the very first thing one can sow in late winter.

The Sunflower Family -- *Asteraceae* (old name = Compositae)

lettuce, endive, radicchio, artichokes, Jerusalem artichokes, burdock, salsify

Lettuce self-pollinates, which makes it a good candidate for seed saving without too much hassle (although collecting the seed is a bit of work). Aster family plants have flowers that occur in dense clusters ... a dandelion "flower," for example, is actually composed of dozens (or even hundreds) of individual flowers, all packed closely together.

The Squash Family -- *Cucurbitaceae*

summer squashes, winter squashes, cucumbers, melons of all types, and gourds

Cucurbits are warm-season crops. They have a number of pests and diseases in common. They may be direct-sown or transplanted, but some kinds require long seasons to reach maturity, making transplanting more attractive.

The Bean Family -- *Fabaceae* (old name = Leguminosae)

fresh beans, dry beans, "shelly" beans, lima beans, runner beans, peas, cowpeas, lentils, garbanzo beans, fava beans, soy beans (clovers, sweet clovers, vetches, and alfalfa ... all important cover crops ... are also in this family)

Most familiar legume species fix nitrogen from the atmosphere into the soil ... making them very attractive as cover crops. Nitrogen fixing is actually done in symbiosis with a bacterium specific to the species of legume. For reliable nitrogen fixing, it's a good idea to use the appropriate bacterial inoculant, frequently available at garden centers and through mail order. It's very easy to cause rot in bean seeds, which in turn may mean that the entire planting is lost. Never overwater bean seeds, and always wait to plant them until soil temperatures have warmed significantly before planting. Ideal soil temperature for germination is 80 degrees Fahrenheit for snap beans.

The Mint Family -- *Lamiaceae* (old name = Labiatae) (more herbs than vegetables)

Basil, mint, sage, rosemary, spearmint, catnip, thyme, oregano, savory.

Flower shape is very characteristic (bilaterally symmetric). Mint family plants (mostly herbs) often contain aromatic oils, which is what makes them valuable as herbs. Basil is perhaps the most popular of the mint family garden plants. It tolerates absolutely no frost, so wait to plant it out until all danger of frost is past.

The Grass Family -- *Poaceae* (old name = Graminae)

corn (also many grains, including wheat, rye, barley, oats, rice, millet, and sorghum -- many of which make fine cover crops)

Corn is the most commonly grown of the grass crops. It requires warm temperatures and is a very heavy feeder. Other grains are commonly used as cover crops -- their fibrous roots usually do a great job of improving soil structure.

The Rose Family -- *Rosaceae* (the garden plants in this family are mostly fruits)

Apples, pears, plums, peaches, apricots, almonds, cherries, quinces, hawthorns, raspberries, blackberries, strawberries, roses, loquats, medlars

The bulk of our temperate fruits are in the rose family. Most of these are woody plants. The exception is strawberries, which are widely adaptable as to climate and soil. Strawberries are a fairly easy way to get started growing fruit.

The Onion Family -- *Alliaceae*

Onions, garlic, shallots, bunching onions, topset ("Egyptian") onions, leeks, elephant garlic, chives, garlic chives

Onion family seeds are frequently short-lived, so acquiring fresh seed may be important. Several types of alliums overwinter relatively well in Colorado. Garlic should be planted in September for harvest the following July (use stiffneck varieties in Colorado -- softneck types may not survive the winter). Same for shallots. For big bulb onions, either sow in the late summer (last couple weeks of summer) or very early in the next growing season. Onion bulbs begin to form when the day length is right for the particular variety, so getting as much vegetative growth in as possible before bulbing time will result in the largest bulbs.

The following are good resources for information on crops, with some degree of organization by botanical family:

Patent & Bilderback, Garden Secrets -- good source of information on growing each crop. Some chapters organized by botanical family.

Seymour, The Self-Sufficient Gardener -- good drawings of vegetables, several sections on different botanical families.