Seed Saving – Bare Bones Version

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Bean - Phaseolus vulgaris

HARVEST: Allow pods to dry brown before harvesting, about six weeks after eating stage. If frost threatens, pull entire plant, root first, and hang in cool, dry location until pods are brown.
PROCESS: Small amounts of pods can be opened by hand. Flail larger amounts. Remove large chaff by hand or fork. Winnow remaining particles.
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Beet - *Beta vulgaris* **2 year process**

INBREEDING DEPRESSION: Save seed from at least 6 different beets to ensure genetic diversity and vigor.
SELECTION TRAITS: Root color: red, red with white stripes, pink, gold, and yellow. Root shape: round, cylindrical.
HARVEST: Cut 4' tall tops just above the root when majority flowering clusters have turned brown. Tops can be stored in cool, dry locations for 2-3 weeks to encourage further seed ripening.
PROCESS: Small quantities of seed can be stripped by hand as seed matures. Large numbers of tops can be put into a cloth bag and stomped or pounded. Chaff can be winnowed.
NOTE: Seeds must be soaked in water overnight to leach the germination inhibitor in the seed coat.
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Cabbage Family - *Brassica oleracea*
Includes broccoli, brussels sprout, cauliflower, cabbage and kale.

INBREEDING DEPRESSION: Plant at least 6 different plants to protect vigor and ensure a reasonable amount of genetic diversity.
SELECTION TRAITS: Plant characteristics: t all, D; side buds, D. Plant color: purple, green, magenta. Leaf shape: wide, entire, smooth, hairy.
HARVEST: Broccoli, cauliflower, cabbage and kohlrabi heads grown for seed should not be trimmed for consumption. Brussels sprouts, collards and kale can be lightly trimmed for eating without affecting quality seed production. If small amounts of seeds are wanted, allow individual pods to dry to a light brown color before picking and opening by hand. Lower pods dry first followed by those progressively higher on the plant. For larger amounts of seeds pull entire plant after a majority of pods have dried. Green pods rarely produce viable seeds even if allowed to dry after the plant is pulled.
PROCESS: Smash unopened pods in cloth bag with mallet or by walking on them. Chaff can be winnowed.
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Carrot - *Daucus carota* **2 year process**

INBREEDING DEPRESSION: Carrots can exhibit severe inbreeding depression. Save and mix seed from as many different carrots as possible.
SELECTION TRAITS: Root color: white, D; black, orange, purple, red, yellow, r. Root shape : tapered, triangular, round, stubby.
HARVEST: For small amounts, hand pick each umbel as it dries brown. Large amounts of seed can be harvested by cutting entire flowering top as umbels begin to dry. Allow to mature in cool, dry location for an additional 2-3 weeks.

PROCESS: Clean small amounts by rubbing between hands. Larger amounts can be beaten from stalks and umbels. Screen and winnow to clean. Carrot seed is naturally hairy or "bearded". Debearding in the cleaning process does not affect germination.
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Celery **2 year process**

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Chickpea

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Cucumber - Cucumis sativus
(All cucumbers except Armenian cucumbers)

INBREEDING DEPRESSION: Although inbreeding depression is not usually noticeable in cucumbers, seeds should be saved from at least 6 cucumbers on 6 different plants.
HARVEST: Cucumbers raised for seed cannot be eaten. They should be left to ripen at least 5 weeks after eating stage until they have turned a golden color. First, light frost of the season will blacken vines and make cucumbers easier to find. Undamaged fruits can be stored in cool, dry place for several weeks to finish ripening.
PROCESS: Slice fruit lengthwise and scrape seeds out with spoon. Allow seeds and jelly-like liquid to sit in jar at room temperature for 3 or 4 days. Fungus will start to form on top. Stir daily. Jelly will dissolve and good seeds will sink to bottom while remaining debris and immature seeds can be rinsed away. Spread seeds on a paper towel or screen until dry. (See instructions for tomato.)
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Lentil – see Bean
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Lettuce - Lactuca sativa

HARVEST: Some outside leaves can be harvested for eating without harming seed production. Allow seed heads to dry 2-3 weeks after flowering. Individual heads will ripen at different times making the harvest of large amounts of seed at one time nearly impossible. Wait until half the flowers on each plant has gone to seed. Cut entire top of plant and allow to dry upside down in an open paper bag.
PROCESS: Small amounts of seed can be shaken daily from individual flowering heads. Rub with hands to remove remaining seeds. If necessary, separate seeds from chaff with screens.
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Muskmelon - Cucumis melo
Divided below into seven separate groups because of similar features. All *C. melos* varieties in all groups will cross with each other. They will not cross with watermelons which are *Citrullus vulgaris.*
Indorus: honeydew, crenshaw, casaba
Conomon: Asian, pickling melons
Dundaim: pocket melon
Cantalupensis: true cantelopes (without netted skin)
Flexuosus: Armenian cucumbers
Reticulatus: Persian melons, muskmelons with netted skin and orange flesh
Chito: orange melon, garden lemon melon

INBREEDING DEPRESSION: Not usually a problem with muskmelons.
HARVEST: Muskmelon seed is mature and can be harvested from ripe and ready to eat muskmelons.
PROCESS: Simply rinse seeds clean, dry with towel and spread on board or cookie sheet to complete drying.
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Mustard – see Cabbage
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Onion - *Allium sp.* **2 year process**

Varieties within each onion species will cross with each other. Crosses between species although not common, are possible.
Allium schoenoprasum: Common chives
Allium tuberosum: Garlic chives
Allium fistulosum: Japanese bunching onions (Occasional crossing between *A. fistulosum* and *A. cepa* has been observed.)
Allium cepa comprised of three groups: Aggregatum includes shallots, multiplier onions and potato onions; Cepa our biennial, common storage and slicing onions; Proliferum includes the Egyptian or walking onions.

INBREEDING DEPRESSION: Onions display a fair amount of inbreeding depression after two or three generations of self-pollination. Save and mix the seeds from at least two different plants.
SELECTION TRAITS: Bulb color: white, D; buff, red, yellow, r.
HARVEST: Clip umbels as soon as majority of flowers have dried. Seeds will start dropping from some flowers at this time so check often. Allow to dry in cool, dry location for up to 2-3 weeks.
PROCESS: Fully dried flowers will drop clean seeds naturally. For small amounts, rub remaining flowers to free seeds. For larger amounts, rub heads over screens. Winnow to remove remaining debris.
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Peas - Pisum sativum

HARVEST: Allow pods to dry brown before harvesting, about four weeks after eating stage. If frost threatens, pull entire plant, root first, and hang in cool, dry location until pods are brown.
PROCESS: Small amounts of pods can be opened by hand. Flail larger amounts. Remove large chaff by hand or fork. Winnow remaining particles.
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Pepper - Capsicum annuum

HARVEST: Harvest mature, fully-ripe peppers for seed. (Most bell peppers turn red when fully mature.) If frost threatens before peppers mature, pull entire plant and hang in cool, dry location until peppers mature.
PROCESS: There are two methods, dry and wet, to process pepper seeds. The dry method is adequate for small amounts. Cut the bottom off the fruit and carefully reach in to strip the seeds surrounding central cone. In many cases, seeds need no further cleaning. To process the seed from large amounts of peppers, cut off the tops just under the stem, fill a blender with peppers and water and carefully blend until good seeds are separated and sink to bottom. Pepper debris and immature seeds will float to the top where they can be rinsed away. Spread clean seeds on paper towel and dry in cool location until seed is dry enough to break when folded.
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Radish - *Raphanus sativus*

HARVEST: Harvest 3' tall stalks containing seeds pods when pods have dried brown. Pull entire plant and hang in cool, dry place if all pods are not dried at the end of the growing season.
PROCESS: Open pods by hand for small amounts of seed. Pods that do not open when rubbed between hands can be pounded with hammer or mallet. Winnow to remove remaining chaff.
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Spinach - *Spinacia oleracae*

HARVEST: Some outside leaves can be harvested for eating without harming seed production. If possible, wait until all plants have dried brown. Pull entire plant and hang in cool, dry place if necessary at the end of the growing season.
PROCESS: Strip seeds in upward motion and let them fall into container. Chaff can be winnowed. Use gloves for prickly-seeded types.
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Squash/Pumpkin -
Cucurbita maxima varieties with large, hairy leaves, long vines and soft, hairy stems and include: banana squashes, buttercups, hubbards and marrows
Cucurbita mixta varieties with large, hairy leaves, long vines and hard, hairy stems and include the cushaws
Cucurbita moschata varieties similar to *C. mixta* with flaring stems at the fruit and large, green sepals surrounding the flowers and include: butternuts
Cucurbita pepo varieties with prickly stems and leaves with a hard, five-angled stem and include: acorn squashes, cocozelles, pumpkins, crooknecks, scallops, spaghetti squashes and zucchinis

HARVEST: Squash must be fully mature before harvested for seed production. This means that summer squashes must be left on the vine until outer shell hardens. Allow to cure 3-4 additional weeks after harvest to encourage further seed ripening.
PROCESS: Chop open hard-shelled fruits and scoop out seeds. Rinse clean in wire strainer with warm, running water. Dry with towel and spread on board or cookie sheet to complete drying.
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Tomato - Lycopersicon esculentum

HARVEST: If possible, allow tomatoes to completely ripen before harvesting for seed production. Unripe fruits, saved from the first frost, will ripen slowly if kept in a cool, dry location. Seeds from green, unripe fruits will be most viable if extracted after allowing the fruits to turn color.
PROCESS: Cut the tomato into halves at its equator, opening the vertical cavities that contain the seeds. Gently squeeze out from the cavities the jelly-like substance that contains the seeds. If done carefully, the tomato itself can still be eaten or saved for canning, sun-drying or dehydrating.
Place the jelly and seeds into a small jar or glass. (Add a little water if you are processing only one or two small tomatoes.) Loosely cover the container and place in a warm location, 60-75° F. for about three days. Stir once a day.

A layer of fungus will begin to appear on the top of the mixture after a couple of days. This fungus not only eats the gelatinous coat that surrounds each seed and prevents germination, it also produces antibiotics that help to control seed-borne diseases like bacterial spot, canker and speck.
After three days fill the seed container with warm water. Let the contents settle and begin pouring out the water along with pieces of tomato pulp and immature seeds floating on top. Note: Viable seeds are heavier and settle to the bottom of the jar. Repeat this process until water being poured out is almost clear and clean seeds line the bottom of the container. Pour these clean seeds into a strainer that has

holes smaller than the seeds. Let the excess water drip out and invert the strainer onto paper towel or piece of newspaper. Allow the seeds to dry completely (usually a day or two). Break up the clumps into individual seeds, label and store in a packet or plastic bag.
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Turnip/Chinese Cabbage - *Brassica campestris*

Formerly *B. rapa. B. campestris* varieties, divided below into five separate groups because of similar features, will cross with each other.)
Rapifera: root turnips
Ruvo: flower-stalk turnips including Italian turnips, rapa and broccoli raab
Chinensis: nonheading varieties of Chinese mustard including pak choi and celery mustard
Pekinensis: heading varieties of Chinese cabbage
Perviridis: spinach mustards

INBREEDING DEPRESSION: Plant at least 6 different plants to ensure a reasonable amount of genetic diversity.
HARVEST: Turnips grown for seed should not be trimmed for eating. Chinese cabbage can be lightly trimmed for eating without affecting quality seed production. If small amounts of seeds are wanted, allow individual pods to dry to a light brown color before picking and opening by hand. Lower pods dry first followed by those progressively higher on the plant. For larger amounts of seeds pull entire plant after a majority of pods have dried. Green pods rarely produce viable seeds even if allowed to dry after the plant is pulled.
PROCESS: Smash unopened pods in a cloth bag with mallet or by walking on them. Chaff can be winnowed.
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