

How to Harvest, Process, and Store Vegetable Seeds

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A Quick Comparison of Vegetable Seeds to Silver Dollars

The small seed envelopes available for sale at hardware stores and supermarkets are generally priced between \$0.97 to \$1.69 per package. Each individual package usually contains somewhere between 100 mg to 3.5 g of seed, with an average of 900 mg of seeds per package. 1000 mg equals 1 gram and 1 gram equals 0.035 standard ounces. Therefore 900 mg equals approximately 0.0315 standard ounces or 0.0287 troy ounces. If the average seed package contains 900 mg of seeds and cost \$0.97 then that is equivalent to \$33.80 per troy ounce, which far exceeds the current market price of a one-ounce United States Silver Eagle. (Note: $\$0.97 / 0.0287$ troy ounce = \$33.80 per troy ounce.)



Therefore, in today's normal global economy, seeds are more expensive per ounce than pure refined silver. And history has repeatedly demonstrated that during serious worldwide famine conditions, food and seeds eventually become more valuable than gold.

Basic Instructions for Saving Vegetable Seeds

- SEED TYPES:** When you first purchase seeds you should avoid "Hybrid Seeds." Instead you should buy "Heirloom Seeds" or "Open Pollinated Seeds." Hybrid seeds are "man-made seeds" and they are only good for ONE planting. (Note: If you plant hybrid seeds and then save the seeds from the hybrid plants that are produced, and then plant those seeds the following spring, the results will be unpredictable. The plant that grows will usually resemble one of its parents or grandparents or something in-between. It is also possible that it may produce NO fruit at all.) Heirloom seeds, on the other hand, will produce crops that yield seeds that will reproduce the same plant year after year after year as God originally intended. (Genesis 1:11 - *Then God said, "Let the earth bring forth grass, the herb that yields seed, and the fruit tree that yields fruit according to its kind, whose seed is in itself, on the earth;" and it was so.*) When you purchase a package of seeds, you should NOT plant ALL the seeds from the original package the first year. Instead you should save some of them for planting in future years in the event your first year's planting efforts are not successful. You should also clearly mark exactly where you plant each type of seed with the name and variety of that seed so you can keep track of which varieties of seed do best in your climate and in your soil.
- DISEASE AVOIDANCE:** After you have planted your seeds and the plants appear, do NOT collect seeds from a diseased plant because the disease will have infected that specific plant's genes and all future plants grown from those seeds will be easily susceptible to that same disease.



3. **SEED SELECTION:** Use the very best looking, strongest, and most productive plants in your garden for seeds. Generally, you are NOT looking for that ONE special fruit on the vine. Instead the characteristics you should look for are: early bearing of fruit, total fruit yield, fruit size and flavor and aroma, and disease resistance. Also, if applicable, late bolting to seed. Resist the urge to eat your most delectable looking vegetables. Those are the ones you want to duplicate every year in the future. After you have selected the fruits you want to keep for seed, identify them with a special marker such as a wooden stake beside the plant, or a ribbon or string loosely tied to the plant or vine. In most cases (but not all) it is important to save seeds from at least three different plants of the same variety to provide good pollination opportunities the following spring.
4. **SEED RIPENESS:** Allow seeds to fully ripen before harvesting to achieve the best germination yield the following spring. The seed must be given time to store enough nourishment so it can germinate the following spring and grow into a healthy seedling.
5. **DRYING:** Seeds must be dried before they are stored (between 5% to 13% moisture content, with an average of 8%). Individual seeds should be separated from one another so they can dry more evenly. Larger seeds will require more time to air dry whereas smaller seeds will require less time. Do NOT try to dry the seeds too quickly or they may shrink and crack. And do NOT dry at a temperature higher than 100°F. Indoor air drying is usually the best. However, if you live in an extremely humid area, then you may dry your seeds by placing them in the sun in front of a southern facing window for about two days. Since there is no easy inexpensive method for measuring the exact moisture content of your seeds, you will need to use your own judgment based on your personal experience. Generally the drier the seed (but NOT below 5%), the longer the seed will remain alive in storage. Based on Dr. James Harrington's research, each additional 1% decrease in the dryness of a vegetable seed from 13% down to 5% will double its storage life, However, below 5% will normally kill the seed and above 13% will usually result in the seed not surviving the first winter. Since the home gardener does not have the expensive equipment to accurately measure the exact moisture content of a batch of seeds, the home gardener may wish to use a trial and error approach. When you first suspect that your seeds are dry enough, put half of them into paper envelopes and label the envelopes with the variety of seed and indicate how many days the seeds were dried. Continue drying the remainder of the seeds for a few more days. Then put half of those seeds into paper envelopes and label them as your second drying with the total number of drying days. After a few more days of drying put the remainder of the seeds into a paper envelope and label them as your third drying with the total number of drying days. When you test each envelope of seeds in future years, you can use this trial and error method to estimate the optimal number of drying days for each type of seed based on your climate, and your humidity, and your average normal drying conditions.
6. **STORAGE:** AFTER your seeds are dry, store your seeds in a standard small paper envelope, or a paper bag, or a cloth bag in a dry, cool area. Do NOT allow the seeds to remain in direct contact with the air or they will gradually absorb moisture from the humidity in the air with the passage of time. After placing the seeds in a standard small paper envelope or cloth bag, you can store that envelope or bag inside a standard plastic freezer bag. Freezer bags are more expensive and of a higher quality than regular plastic bags. Do NOT seal your seeds inside a vacuum plastic bag without air because seeds are living organisms and they need a MINIMUM amount of air to continue their life cycle. The BEST place to store seeds is in a plastic freezer bag inside a refrigerator at a temperature between 33°F to 40°F. This will more than double the storage life of your seeds.

7. **LABELING:** Clearly label each of your seed envelopes or bags using permanent ink to identify the exact variety of seed and the year the seed was harvested. Also include the number of days the seed was allowed to dry, along with any unusual weather conditions during the drying process, such as unusually humid weather or unusually warm or cold weather during the drying process.
8. **SEED BANK:** Most seeds can successfully germinate for three to five years after harvesting, even if they are NOT stored in a refrigerator. Therefore, it is prudent to have your own “Seed Bank” into which you deposit approximately 10% of the seeds you harvest each year. If an unexpected disease attacks your crops one year then you will NOT be able to harvest any seeds from that year’s crops, even though you may be able to eat some or most of that year’s poor quality marginal vegetables. In this type of situation your “Seed Bank” will permit the re-establishment of the quality of your crops in future years. The seeds in your “Seed Bank” are your insurance against unpredictable future diseases that may sweep through your geographical area. They are also good insurance against an unexpected cross-pollination that produces a seed that is different than you expected. In most cases you will not become aware of this type of problem until harvest time the following fall. Once again, your “Seed Bank” will allow you to re-establish this variety the following spring using seeds saved from previous years BEFORE the problem appeared.
9. **EMERGENCY SEED RESERVE:** Each spring you should gradually plant each variety of seed over an extended period of several weeks. You should NOT plant all your seeds of one variety at the same time. This reduces your risk of loss to late frosts and it provides a longer harvest period for fresh vegetables for the table. If you have seeds that are more than one year old which are NOT part of your “Seed Bank”, then your first planting the following spring should be one-half of those older seeds. If you do NOT have any two or three year old seeds, then do NOT plant more than half your previous year’s seed the following spring. Save at least half of the previous year’s seed as an “Emergency Seed Reserve” (in addition to your “Seed Bank”). Occasional late snows or an unexpected late frost can kill everything you plant at the beginning of spring. Your “Emergency Seed Reserve” will allow you to plant a second time that same year. Later during the spring or summer other problems may arise, such as heavy rains or no rains or insect damage or tornados or hurricanes, and these disasters could result in no crops to harvest in the fall. In disaster situations like these, it provides some comfort to know that you still have a reasonable amount of seed reserved for planting the following year. If you are forced to use your “Emergency Seed Reserve,” then only plant half of them and keep the rest of the seeds in reserve. Always keep at least half of your remaining seed as an “Emergency Seed Reserve” for really hard times. This means each future planting will be much smaller, but that is much better than having NOTHING to plant at all. Because of unpredictable situations such as the above, each year it would be wise to harvest at least twice the amount of seed you think you will need the following year. This strategy will also provide you with seed to share, sell, or trade and it will bring you one step closer to being an independent, resourceful human being in God’s natural order of things.
10. **PREPARING SEEDS FOR PLANTING:** (Note: These suggestions are optional.) Place the seeds you wish to plant in the freezer compartment of your refrigerator for three hours. When you remove the seed from the freezer the rush of warm air will help to break its winter dormancy. Then place the individual seeds between two damp paper towels for one day in a warm area. The seed is now in an optimal condition for immediate planting.
11. **SPRING GERMINATION TEST:** (Note: This step is optional.) You can test the viability of your seeds BEFORE you plant them in the ground in the spring. Use a medium-tip permanent marker to write the name of the seed and the year it was harvested on a DRY paper towel. Then dampen the

paper towel and place ten seeds on one-half of the towel. Fold the towel in half so the seeds are between the two halves of the damp paper towel. Place the damp paper towel inside a plastic trash bag and put it in a warm place. You can put several damp paper towels containing different seed varieties in the same plastic trash bag. Keep the paper towels slightly damp but NOT soaking wet. Periodically check the seeds based on the average germination time for each type of seed. You can determine the "approximate" germination rate by counting the number of seeds that sprout and dividing by the original number of seeds tested. For example, if you tested 10 seeds and 8 of them sprouted, then the germination rate is 80% ($8/10 \times 100$). You can then plant these sprouted seeds in a peat pot indoors if the outdoor weather is too cold, or you can plant them in the ground if warm weather has arrived.