Non-Hybrid Seed Info

Tips for Garden Planning / FAQ About Non-Hybrid Seeds / Visual Garden Steps / How to plant? / Herbs

How to plant?

This section will tell you how to plant each vegetable type and many herbs as well. You are welcome to print this page out on your printer if needed.

Vegetable	Amount needed for 100 ft. Direct Seed	Amount Seeds/ Acre Direct Seed	Transplant (Plant /Rate)	Distance apart in row after thinning (Inches)	Distance Between Row (Inches)	Planting Depth (Inches)	Approx. # of Seed per ounce	Approx. # of Seed per pound	Approx. # of days to Germination.
Asparagus	1 ounce	4-5 lbs.	--	18-36	24-36	1/2	800	12,800	15
Beans, Lima	1-2 lbs.	50 lbs.	--	4-6	24-36	1 to 1 & 1/2	75	1,200	7
Beans, Bush	1-2 lbs.	60-100 lb.	--	1&1/2 - 4	18-36	1 to 1 & 1/2	100	1,600	6
Beans, Pole	1/2 - 1 lb.	50 lb.	--	6-8	36-48	1 to 2	100	1,600	6
Beets	1-2 oz.	13 lb.	--	1-4	18-24	3/4 to 1	1,644	26,304	8
Broccoli	1/2 oz.	1 lb.	10,000/ 4 ounce	5-10	24-40	1/2	7,750	124,000	10
Cabbage	1/2 oz.	1 lb.	10,000/ 4 ounce	12-18	24-36	1/2	7,750	124,000	10
Cantaloupe	1 oz.	3 lb.	6,000/3 ounce	24-18	48-96	1 to 2	1,200	19,200	7
Carrot	1/2 oz.	3 lb.	--	1-3	18-24	1/2	23,000	368,000	8
Cauliflower	1/4 oz.	1 lb.	10,000/ 4 ounce	18-24	24-30	1/2	8,900	142,400	10
Collard	1/2 oz.	3 lb.	--	4-8	18-24	1/4	8,000	128,000	10
Celery	1/4 oz.	1 lb.	3,400/ 4 ounce	4-8	20-48	1/8	71,000	1,136,000	21
Corn, Sweet	4 oz.	6 lb.	--	8-12	30-48	1 to 2	206-281	3,300- 4,500	7
Corn, Yellow Dent				16-18 dry land or 12" irrigated for 2 ears/stalk				1,500/lb. ave.	
Cucumber	1 oz.	4 lb.	--	12-36	36-72	1 to 2	1,000	16,000	7
Dill	1 oz.	5 lb.	--	4-8	18-36	1/2	22,720	363,520	21

Eggplant	1/4 oz.	2 lb.	12,000/ 4 ounce	18-24	24-30	1/4 to 1/2	6,400	102,400	10
Kale	1/2 oz.	3 lb.	--	18-24	24-36	12	8,900	142,000	10
Lettuce, Leaf	1/2 oz.	1 lb.	30,000/ 1 lb.	8-10	18-24	1/4	25,000	400,000	7
Lettuce, Head	1/4 oz.	1 lb.	30,000 1 lb.	12-15	18-24	1/4	25,000	400,000	7
Mustard	1 oz.	4 lb.	--	4-8	12-24	1/4	17,600	281,600	9
Okra	2 oz.	8 lb.	--	18-24	24-36	1	500	8,000	10
Onion	1 oz.	4 lb.	--	2-3	18-24	1/2	9,000	144,000	10
Onion, Bunching	3-4 oz.	15 lb.	--	2-3	18-24	1/2	12,500	200,000	10
Parsley	3/4 oz.	3 lb.	--	4-8	12-18	1/4	18,000	288,000	21
Peas	2 lb.	80-120 lb.	--	1-3	24-36	1-2	161	2,580	8
Peas, Cowpea	1 lb.	20-30 lb.	--	2-3	36-40	1 & 1/2 to 2	--	--	--
Pepper	1/4 oz.	2 lb.	9,000/ 4 oz.	15-18	18-30	1/4 to 1/2	4,700	75,200	10
Pumpkin	1 oz.	4 lb.	--	18-24	96	1	120	1,920	7
Radish	1 oz.	10 lb.	--	1	12-18	1/4 to 1/2	3,125	50,000	6
Rutabaga	1/2 oz.	2 lb.	--	6-8	18-24	1/2	12,000	192,000	9
Spinach	1 oz.	12-25 lb.	--	3-6	12-18	1/2 to 1	2,800	44,800	8
Squash, Summer	2 oz.	4-6 lb.	--	36-48	36-48	1 to 2	300	4,800	7
Squash, Winter	1 oz.	3-4 lb.	--	48-72	72-96	1-2	113	1,808	7
Tomato	1/2 oz.	1-2 lb.	5,000/ 2 oz.	24-72	36-84	1/4 to 1/2	10,000	160,000	8
Watermelon Lg. Seed	1 oz.	3 lb.	3,500/ 12 oz.	24-36	72	1	300	4,800	8
Watermelon, Sm. Seed	1/2 oz.	2 lb.	--	24-36	72	1	650	10,400	8

Visual Garden Steps

The first step is always 'garden planning' and is not pictured below. Please, read 'Tips for Garden Planning' and the Herb descriptions for more information on Garden Planning.



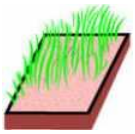
Rake and Fertilize the Soil



Scatter & Plant



Water the Seed



Watch for Sprouting





Thin and Transplant Seed



Weed, Weed, Weed



Protect from Birds



Protect from Bunnies



Bring in the Harvest



Reap the Rewards, Thankfully

Tips for Garden Planning:

1. Swiss Chard will cross-pollinate with Beets.
2. When planting more than one variety of Swiss Chard separate each variety by at least 1/4 mile or they will cross.
3. When planting several varieties of Beans, separate them by at least 25 feet. They will cross-pollinate.
4. Keep beans and peas well picked so that they will keep producing.
5. Pick cucumbers daily so that they will continue to produce.
6. Corn is wind pollinated. Separate varieties by 600' for home use, or 1/2 to 1 mile for absolute purity. Save at least 500 seeds from at least 10% of the plants to maintain vigor and genetic diversity of the variety.
7. Never grow Sweet Peppers in the same garden as Hot Peppers. Hot Peppers are dominant and will cross-pollinate with the sweet.

8. Wear gloves when collecting seeds from hot peppers. Isolate sweet pepper varieties by 150', and hot and sweet varieties by 300'.
9. Broccoli will cross with Brussels sprouts, cabbage, cauliflower, kale, and kohlrabi. Isolate by 1/8 mile for home use. For pure seed of small plantings isolate by 1/4 to 1/2 mile.
10. Carrots isolate from other carrot varieties and Queen Anne's lace by a distance of 330' for home use. For pure seed isolate by 1/8 to 1/4 mile.
11. Carrot STORAGE: Cut off tops and do not wash the roots. Store in the refrigerator or over-winter the roots in the garden by covering with a thick, loose mulch such as straw.
12. Cucumbers - isolate varieties by 1/8 mile for home use. Isolate a minimum of 1/4 to 1 mile for pure seed.
13. Eggplants - Isolate varieties by a minimum of 150' for home use. For pure seed isolate a minimum of 1/8 mile.
14. Mustard Greens - Isolate from mustard and Chinese cabbage a minimum of 600' to 1/8 mile for home use. For pure seed isolate varieties by 1/4 to 1/2 mile.
15. Lettuce - Isolate varieties by a minimum of 12' for home use. For pure seed isolate varieties a minimum of 25 to 50'.
16. Melons - Cantaloupe - Isolate melons by a minimum of 1/8 mile for home use, or 1/2 to 1 mile for pure seed.
17. Onions - Isolate varieties by a minimum of 150'. For pure seed, cage plants or isolate by 1/4 to 1/2 mile.
18. Bunching Onions - Bunching onions are perennial onions which divide at ground level in the same manner as multiplier onions. Unlike multiplier onions they do not form large bulbs. The bases of bunching onions are slightly enlarged like scallions. Once established, clumps need only be divided periodically. Bunching onions are cold-hardy and may be left in the ground year-round, where the ground doesn't freeze.
19. Southern Peas - Isolate from varieties of shell peas, snap peas, other southern peas and asparagus beans by a minimum of 50' for home use. For pure seed isolate a minimum of 150'.
20. Radish - Isolate a minimum of 1/8 mile for home use. For pure seed isolate from wild and cultivated radish by a minimum of 1/4 to 1/2 mile.
21. Pumpkins and Squash - There are four species of pumpkins and squash. The species name is usually indicated in parentheses beside the name of each variety. Crossing occurs easily within a species and rarely between species. Isolate varieties of the same species by a minimum of 1/8 mile if you save seed for home use. Pure seed requires hand pollination or a minimum isolation of 1/4 to 1 mile, depending on planting size. Note: Zucchini, Crooked Neck and Straight Neck squash are all the same species.
22. Turnips - Isolate a minimum of 600' for home use. For pure seed isolate at least 1/4 to 1 mile from mustard, and Chinese cabbage (Pak Choy).

23. Watermelon - Isolate varieties by at least 1/8 mile for home use, or 1/2 to 1 mile for pure seed.
24. Herbs can be used to help reduce insects, and compliment the growth of several garden vegetables.

FAQ Non-Hybrid Seeds

Can I use seeds from my local store for long term storage?

Not recommended. The seed supplied in most garden shops and grocery stores are selected and sold for only this current year's planting. In fact, Agricultural regulations require all seed packages to show date of season packed to protect the consumer from purchasing outdated seed. Storing outdated seed is not a wise preparedness strategy. The germination (ability to sprout and grow) decreases over time and is greatly impacted by moisture content of the seed and temperature of storage. Research shows that long term storage seeds need to be precisely dried to their scientific optimal moisture content to maintain their germination and guarantee seed viability. The two most critical factors for long term storage is temperature (heat decreases germination and cooked seed will not grow) and moisture (too wet starts the germination process or rots the seed, yet without the necessary moisture the growth process can not begin.)

What are Non-Hybrid seeds?

Non-Hybrid seeds are open-pollinating seeds that grow and reproduce true to variety. Our ancestors used these type of seeds for generations as they were very reliable and productive. Modern agricultural methods have produced hybrid or cross pollinated varieties of seeds. When these specialized seeds are collected and replanted, they do not reproduce true to variety and are sometimes sterile. 100% Non Hybrid seeds allow the self reliant gardener the opportunity to collect seed from his mature plants and save for next season. This process becomes a perpetual garden and becomes your life-time supply of garden seed. Think of the money you can save by buying seed just once.

What are Hybrid Seeds?

Hybrid seeds have been genetically altered or cross-pollinated to resist certain types of plant diseases or produce a more attractive uniform looking fruit. The major drawback to hybrid seeds is the need to purchase new fresh seed every year since the altered plants cannot reproduce seed that is true to the parent plant or the fruit of the hybrid variety may be totally sterile, not reproducing any plant whatsoever.

To use an analogy, many hybrid seeds are like crossing a horse with a donkey. You get a mule which is sterile and can't reproduce more mules.

How are the Basic Seed Kit and the Garden Seed Kit Packaged?

The Basic Kit is packaged in a 2 gallon plastic bucket to protect your seeds from pest infestation. The Garden Kit is packaged in a 3 gallon bucket for the same reason.

How long can I store these seeds?

These seeds can be stored safely for 3 years at 65 degrees temperature and much longer at lower temperatures. Viability remains at about 75-85% after 3 years at room temperature. The critical factors for storing seeds are temperature and moisture content. Storage temperature should be a cool area of your home, these seeds may even be stored in your refrigerator. Each 5.6 degree C (10.08 degree F) drop in storage temperature may double the storage life of non-hybrid seeds. People sometimes ask if freezing will hurt these seeds, the answer is no. The National Seed Laboratory freezes their long term storage seeds. Nature freezes seeds during their dormant winter period with no adverse effects.

How do I harvest the seeds to reuse next season?

We recommend you purchase *Seed to Seed, by Susan Ashworth*. This book supplies great information about seed harvesting for the novice or experienced Seed Saver. She does however, implement hybrid seeds and non-organic methods of cultivation.