Garden To Do List

- Cut back ornamental grasses just above ground level, leaving no more than 3-6 inches of stubble. This allows for new growth, while reducing the frequency with which grasses may need divided.
- Continue starting seeds indoors. Many cool season vegetable crops can be transplanted outdoors into the garden from mid-March to Mid-April, including broccoli, kale, cabbage, potatoes, and beets.
- Peas, leeks, lettuce, and onions can be planted outside in early March if weather conditions allow. These seeds are able to sprout in cooler weather, when soil temperatures reach around 35 degrees Fahrenheit.
- Fertilize spring flowering bulbs as growth emerges. Once flowering begins, fertilizers will be too late to benefit the bulb for the next growing season.
- Conduct a soil test before the growing season begins. Soil amendments will be much easier to incorporate before new gardens or flowerbeds are planted.

Testing Germination Rate of Old Seeds

Most gardeners have seeds from past gardening seasons. Whether they were extra seeds leftover at the end of the row, seeds collected from the garden, or gifts from other gardens, the question that remains is this: will these seeds still grow?

Seeds, just like the plants they come from, are living things. This means that even though they sit in a dormant state, waiting for the ideal conditions to start growing, they are alive and impacted by their storage conditions. The longer a seed is stored, the more the quality of that seed decreases, and the less likely it is to grow. Heat, humidity, moisture, and temperature fluctuations the seed is exposed to during storage only further decreases a seed's lifespan.

Most seeds, when stored well, can easily be saved for one year and still germinate, or sprout from the seed and grow well. Seeds stored for three to four years often experience a significant decrease in their ability to germinate, however when stored in ideal conditions, some seeds can survive ten or more years in storage and still germinate. Since there is so much variability in how long a seed can be stored, it is best to test old seeds before planting.

To test if old seeds are still worth planting, gathering up a paper towel, plastic bag or container, and some water for an easy, at-home experiment. Here is what you will do:

1. Start by taking a couple of sheets of paper towel and dampen them with water. Wring out any excess water and lay the paper towel out flat.
2. Place 10 or more seeds on one-half of the damp paper towel. The more seeds tested, the more accurate the results, however, only plan to use a portion of the total seeds available.
3. Fold the paper towel over the seeds, covering the seeds, and place it in a plastic bag or container. Seal the bag to trap in the moisture. Consider labeling the bag with the date and type of seed tested.
4. Place the bag in a warm location of the house, such as on top of the refrigerator, in a sunny window, or over a heating vent. Warm temperatures above 70 degrees Fahrenheit will speed up germination.
5. Check the seeds every few days for signs of germination and see if additional water is needed to keep the paper towel damp. Most seeds will germinate within 5-10 days, however some seeds may take slightly longer.

Determine the germination rate of the seeds by counting the number of seeds that have started to grow and divide that number by the total number of seeds tested on the paper towel. Multiply by 100 to determine the % germination rate.

$$\frac{\text{\# of Seeds Growing}}{\text{Total \# of Seeds Tested}} \times 100 = \text{\% Germination Rate}$$

A germination rate of 90% or above is excellent for most seed species. Germination rates between 70-80% are still acceptable, and common for many types of seeds. For seeds within this range, consider planting a few additional seeds to offset the lower germination rate is 50-60% or less, it will probably be best to purchase new seeds for the upcoming growing season.

When the germination test is over, most often seeds from the test are disposed of. Seedlings are extremely delicate as their first root (called a radicle) emerges, and handling and seed counting may damage the radicle. If the emerging roots or shoots are damaged, the plant will not survive. If the seed can be handled carefully, without damaging the emerging plant, the seeds can be planted in the garden or in pots for transplanting outside later. This will be most easily accomplished with larger seeds, such as sunflowers, pumpkins, or squash.

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