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Test Garden Seed Viability and Hold off Starting Transplants

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Gardening looks to be as popular this year as it was last spring. Now is the time to order seeds but if you grow your own transplants it's too early to start.

If you have leftover seed and are wondering if the seed is still viable or if you should order new, check the seed packet to see what date the seed was packaged and do a simple germination test.

Most seed remains viable for about 3 years, however, germination does decrease with age. Older seed needs to be tested and may need to be planted thicker.

For a germination test, place 10 seeds on half of a paper towel moistened with warm water. Roll or fold the paper towel twice and place it in a plastic bag with a few holes for air exchange. Place the bag in a warm place like the top of the refrigerator. Remoisten with warm water as needed.

After one week, remove and count all sprouted seeds. Return the moistened paper towel to the plastic bag for one more week, then count additional sprouted seeds. Add this to the first number to determine the percent germination. If only 50 percent of the seed germinates, plant the seed twice.

With more people gardening last year, some garden transplants were in short supply. If you're considering growing your own, know it can be challenging to grow sturdy transplants that perform well.

A few tips are to use potting mix and not soil as it carries disease that can kill seedlings. Provide adequate light which I will talk about later in this article. Provide warm temperatures during seed germination and cooler temperatures while transplants are growing.

Gently brush the small plants with your hand about 20 times once or twice a day. No, plants don't like to be petted. Brushing simulates wind in their natural outdoor environment and leads to sturdier transplants.

For now, determine when to start seed to avoid the common mistake of starting too early. Larger transplants do not provide an earlier harvest. Instead, they translate to later harvests and lower yields.

For cabbage, broccoli and cauliflower, start seed 8 weeks before the expected outdoor planting date sometime in April. Start tomatoes six weeks before their expected outdoor planting date in May.

Cucumber, squash, muskmelon and watermelon should be started only 4 weeks before planting in mid-May. Know that these four vine crops are easy to direct seed in the garden and this may be the best route to go for home gardeners.

For seed to germinate, some must have darkness or light. The seed of most plants germinate in either but some require darkness, like phlox and verbena. Others, such as begonia, coleus, geranium, impatiens, petunia and snapdragon require light and the seed should not be covered by soil.

All plants require 16 hours of fairly intense light once they germinate. South facing windows do not provide enough light so use fluorescent or LED fixtures. Suspend fluorescent lights 2 to 4 inches above plants. Use LED lights specifically designed to grow plants and follow manufacturer directions.

When growing transplants, leave the lights on for 16 hours each day, not any shorter and not any longer. Plants need this day length but also require a period of darkness each night to develop into sturdy transplants.

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It's time to order garden seeds. If you're wondering if leftover seed is viable or if you should order new, check to see what date the seed was packaged. Most seed remains viable about 3 years, however, germination decreases with age. Older seed may need to be planted more thickly. Also, some seed is shorter-lived. For example, plants in the carrot family are usually viable 1 to 2 years. To check seed viability, place 10 seeds on a paper towel moistened with warm water and cover with another moist towel. Roll these up and place inside a plastic bag with a few holes for air exchange. Place the bag in a warm place like the top of the refrigerator. Remoisten towels with warm water as needed. After the first week, check for germination. Remove and count all sprouted seeds, then check again in another week. Add these two numbers to determine the percent germination. (Ward Upham, Kansas State)

With more people gardening last year, some garden transplants were in short supply. If you're considering growing your own transplants, know it can be challenging to grow sturdy transplants that perform well in the garden. Be sure to learn about correct lighting, temperature and growing medium needed. And avoid a common mistake made which is starting seed too early. Depending on what you're growing, most seed should be started only 4 to 8 weeks prior to the expected outdoor planting date. And it varies for plant type. For cabbage, broccoli, cauliflower, and eggplant, seed is started about 8 weeks before the outdoor planting date; tomatoes about six weeks before; and cucumber, muskmelon, squash and watermelon only 4 weeks ahead. Know that these last four vine crops are very easy to direct seed into the garden, and that may be the best route to go for home gardeners.

If you're planning to grow your own garden transplants, start at the correct time which is usually six to eight weeks before the outdoor planting date, know if seed needs darkness or light to germinate, and provide good lighting. Most plants germinate in darkness or light but some require darkness, like Phlox and Verbena; and others require light, such as Begonia, Coleus, Geranium, Impatiens, petunia and Snapdragon; and their seed should not be covered by soil. All plants require adequate light once they emerge. South facing windows may not provide enough light so fluorescent or LED fixtures are used. Suspend fluorescent lights 2 to 4 inches above plants. Use LED lights designed specifically to grow plants and follow manufacturer directions. For growing transplants, leave lights on for 16 hours each day, not any shorter and not any longer. (Source: Ward Upham, Kansas State)

Dormant oils are applied to dormant plants to help manage pests that overwinter on plants, mainly scale insects and mites. Dormant oils reduce a wide range of insects and mites and can be less harmful to beneficial insects. While dormant oils may be applied most any time during plant dormancy, their likely to be more effective if applied in mid to late winter when pests are in a weakened state. In Nebraska, late February into March is the ideal time to apply dormant oils. There is a risk of phytotoxicity, or damage to plants, from dormant oils. To avoid plant damage, read label directions for use, application timing, and a list of plants products should not be applied to. Always apply dormant oils to plants before bud break to avoid tender plant tissue being damaged. Make applications when temperatures will remain above freezing, ideally above 40 degrees F., for 24 hours and continually agitate the spray solution.

If you're itching to do some yard work on a mild winter day, stay away from pruning spring blooming shrubs. While February and March are okay to good times to prune some shrubs, if spring blooming shrubs, such as lilac, forsythia, some Spirea, chokeberry and serviceberry, are pruned at this time, flower buds will be removed and blooming will be lost or greatly reduced for this year. Spring blooming shrubs develop their flower buds during the previous season and so bloom on last year's growth. If these shrubs are pruned any time from late summer up until spring flowering, flower buds will be removed. The shrub will not be harmed, and it will bloom again the next spring. If renovation pruning is needed, where a large amount of wood is removed, it's fine to prune shrubs prior to blooming. But for light thinning and heading back of most spring blooming shrubs, wait until just after they bloom in spring to prune.