

## Yard and Garden - 03-03-2012 - Ted Griess / Extension Horticulture Assistant

Sexual or asexual — those are your choices. Today, I choose sexual — plant propagation that is. Although many plants are propagated asexually by root, stem or leaf cuttings, most flowering plants are proliferated by seeds, a product of sexual reproduction.

Remarkable truly describes a seed. Appearing inanimate, a seed contains an embryonic plant that holds the genetic code of its parents. It can remain dormant and viable for many years; yet when exposed to optimal growing conditions including moisture, temperature, light and oxygen, a living plant emerges. Imagine a seemingly lifeless object turning into a living organism.

Just last week the headlines announced that seeds, claimed to be over thirty-thousand years old, were recently discovered frozen in the Siberian tundra. After all those years, these seeds successfully germinated, giving rise to living plants called *Silene stenophylla*. The plants grew, flowered and produced viable seeds of their own, thus perpetuating the species. Surely, that exemplifies how remarkable seeds are.

Growing plants from seed can be a rewarding experience even for the beginner. Each year, like many avid gardeners, I start an assortment of flowers and vegetables from seed. Some I start indoors under lights; while others I sow directly into the soil outdoors when conditions are favorable.

Allow me to share with you a few tips on starting seeds indoors.

Select an area in your home such as a laundry room, basement or even a heated garage to begin this project. Seed starting can be messy with spilled potting soil and water. Work in an area that can accommodate these situations.

You will need a few crucial items: seed packets, potting soil mix, pots and trays that have good drainage holes, a very bright windowsill, or better yet, a moveable fluorescent light fixture with an automatic timer.

Selecting the seeds of plants you like is always an option, but if you are a beginner, I suggest selecting reliable seeds that are relatively easy to start. They might include zinnias, marigolds, cosmos, tomatoes and peppers.

When to plant is critical. One common mistake beginners make is starting seeds too early. Planted too early, seedlings often become overgrown, spindly, and unruly, making them difficult to care for until conditions become favorable for transplanting outdoors. Pay particular attention to the instructions on the seed packet. The when and how to plant are described in detail. For example, it may say to sow seeds indoors six weeks before the average last frost date. I suggest you establish a planting calendar. Calculate the number of weeks from sowing indoors to transplanting seedlings outdoors. Count backwards from May 15 (last average frost date for this area) to the date you begin planting your seeds indoors.

Avoid using ordinary garden soil. Garden soil drains poorly and can easily harbor disease organisms that could damage or kill young seedlings. A lightweight potting soil formulated especially for seed starting works better. It drains freely; yet it retains enough water for seedling roots and is free of disease-causing organisms.

Although most any container with good drainage will work, it is best to purchase specially designed seedstarting pots and trays. If using old equipment, disinfect in a 10% bleach solution (1 part bleach to 9 parts water). Rinse thoroughly.

After planting seeds according to the directions on the seed pack, watering is necessary. For small seeds or surface-sown seeds, water from the bottom in trays that wick the water up into the potting soil. If applied from above, the water may wash away or bury the small seeds too deeply. Carefully pour off excess water once the potting soil is completely moistened. To keep potting soil from drying out, cover with clear plastic or a clear cover designed especially to fit the tray. As soon as tiny sprouts become visible, remove the cover. This allows air to circulate around the seedlings and minimizes disease problems.

Many warm weather plants like tomatoes need 80° to 85° F. to start germinating, but generally, normal room temperature is warm enough for most seeds to germinate.

Although it is possible to grow seedlings on a sunny windowsill, you will get better results if you grow them under bright, adjustable fluorescent lights. Place the lights a few inches from the tops of the seedlings and set the lights to illuminate 14 to 16 hours per day. As the plants grow, raise the fluorescent lights.

A few weeks after seeds start growing, it may be necessary to thin the seedlings. Select the strongest seedling and snip off extra seedlings at the soil line. Continue to care for plants by watering and fertilizing until they are ready to harden off and transplant outdoors.

In the near future I will address asexual reproduction— plant propagation that is.