



Seed Starting

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Why go to the work starting seeds for bedding plants? In the Brainerd Lakes area of Northern Minnesota, is in USDA Zone 3-4 depending on location. This means a cool and short growing season compared to much of southern Minnesota. In some cases, the only way for plants to have time to mature is to give them a head start by growing them indoors for the first weeks after germination. These bedding plants can then be transplanted to the garden when the conditions have warmed sufficiently. While it is certainly possible to purchase a wide variety of bedding plants, the selection may be limited, costly, sold out, or not even available for purchase. To overcome these obstacles, you can start your own plants from seed.

Considerations:

Location: The project location does not need to be a huge greenhouse, but it does need to be large enough to accommodate the seed trays. It should be free of drafts, warm and have access to water and power. The access to water and power is for any heaters, heat mats and lights that may be used. Also consider who will have access to the area and if that might affect the outcome. For example, pets and children can cause damage to tender plants and themselves if given access to the area.

Supplies: Next determine what supplies may be needed. Often it is best to determine what plants you want to start from seed. Some are slow growing, others quite vigorous and quick. Knowing some of these attributes can help determine what growing supplies are needed. Pay attention to seed catalog descriptions of the size of plant, time to germination, time to maturity and other planting instructions as well during the selection process. It is not beneficial to start a plant from seed that cannot possibly mature in the short time afforded by the Minnesota summer.

Additional supplies needed include containers, trays, planting medium, lighting, bottom heat, water, fertilizer, garden tools and any necessary racks for the trays and lighting. These will depend on the location and the chosen seed. Experience suggests starting small the first year, learn from the experiences and adjust as necessary the next year.

The traditional method to start seeds is in a starting medium in the size pot used for direct transplant to the garden. This is the least amount of work and materials, but not always the most successful. Many plants actually like to be started in smaller spaces with a very controlled environment. These small plants are then transplanted to larger containers as they grow. This process can be tedious but is generally more successful. A newer method is to start plants in peat pellets and once the appropriate size, transplant the peat pellet and plant together into larger containers. Not only is this generally more successful, but much easier to manage.

Timing: When to start seeds is determined by the date the selected plants will be ready for transplanting to the great outdoors. Work backward from that date on what the seed packet indicates is the time it takes for plants to germinate and/or be ready for transplanting. For example: For plants ready by June 1, the seeds take six weeks to germinate and be ready to transplant outdoors, the seeds need to be planted by the second week in April (six weeks prior to June 1).

Light: Young plants get all their energy from what is stored in the seeds themselves and what they can produce from photosynthesis. The small plants must have adequate light as soon as they emerge from the soil to ensure your success. Thankfully, there are many lighting options which are relatively

inexpensive including a wide variety of LED and Fluorescent lights which produce a wide spectrum of light the plants can use. The most critical factor is to make sure they produce a cool light and can be adjusted to 2-4 inches from the plants. The young plants need approximately 12-16 hours of light followed by 8 hours of darkness. Using a simple timer is a great help creating a consistent lighting environment.

Fertilizer: Young plants do not need a great deal of fertilizer and most potting soils already contain enough nutrients. However, if starting seeds in peat pellets, a few weeks after germination use a balanced water-soluble fertilizer at ¼ strength. Be careful not to overfertilize these tender plants. If fertilizing previously transplanted plants, use this same ¼ strength fertilizer since the plants at this stage are very sensitive.

First Transplant: When it is time to transplant the seedlings into larger containers, let them dry slightly so the soil or peat pellet is easier to handle. Lift small seedlings from the growing medium using a spoon for transplant to the larger container. To avoid damage, always lift using the spoon and leaves, but never the stem. If transplanting seedlings in peat pellets simply lift the pellet out of the tray and place in the new container and top off with new soil. Immediately water the transplanted plants to ensure they can settle into their new environment. Using peat pellets makes the work much easier and less messy.

Hardening: Tender plants need to be ‘hardened off’ the last few weeks prior to planting in the garden. Hardening off is the process of acclimatizing the tender plants to the variabilities of an outside environment. More intense sunlight outdoors, temperature change and wind can damage tender plants if not done slowly and consistently. Start by moving the plants outdoors for 4-6 hours a day in a shady location, sheltered from the wind. After a few days, slowly increase the amount of time giving the plants time to adjust.

Final Transplant: When ready to plant in the garden choose a cloudy day in the late afternoon. If possible, protect them from wind and temperature fluctuation for the first few days after planting.

Questions can be directed to “Ask a Master Gardener” at (218) 824-1068

Additional information on garden pests and diseases is available at:

<http://apps.extension.umn.edu/garden/diagnose/plant/>

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