

Horticulture 2014 Newsletter No. 1 January 8, 2014

Video of the Week: [Easy to Make Grow Lights](#)

UPCOMING EVENTS

Great Plains Growers Conference

January 9, 10 & 11, 2014

St. Joseph, MO

<http://www.greatplainsgrowers.org/GPVGC2014.html>

Retail Works: Spring Training for Garden Centers

January 29, 2014

Manhattan, KS

<http://retailworks.weebly.com/>

Horticulture 2013 Index Delayed

As many of you know, the University is switching over to a new contact management system for our Web. Our web pages are now locked and we can no longer add documents (such as this newsletter) or make changes to any page. Our web pages are still up and usable, but no changes have been allowed since early September. We do not yet have a target date for this work to be completed. Once we regain access, the site will be brought up to date and we will release two indexes; one will be based on date and the other by subject. (Ward Upham)

VEGETABLES

Starting Garden Transplants from Seed



January is often a cold and dreary month for many gardeners. However, planning for and starting vegetables and flower transplants from seed can make this a much more interesting time of year. Following are the steps needed to be successful in seed starting.

Purchase Recommended, Quality Seed: Start by taking a look at our recommended varieties at <http://www.hfr.ksu.edu/DesktopDefault.aspx?tabid=731>

These plants have proven themselves across the state of Kansas and this is a good place to start when deciding what to plant. However, also talk to your neighbors, friends and garden center about what has worked well for them. Obtain your seeds from a reputable source including garden centers and seed catalogs. If choosing seeds from a business that does not specialize in plants, pay special attention to the package date to make sure the seed was packaged for the current year.

Though most seed remains viable for about 3 years, germination decreases as seed ages. See the accompanying article on using old garden seed for more detailed information.

Determine the Date to Seed: There are two pieces of information that needs to be known in order to determine the date to seed transplants: the target date for transplanting outside and the number of weeks needed to grow the transplant. The target date for transplanting the cool-season crops such as broccoli, cabbage, cauliflower and onions are the end of March to the beginning of April.

Warm-season crops like tomatoes, peppers and most annual flowers are usually planted about May 10. There is a companion article in this newsletter listing common plants and the number of weeks needed to grow a transplant.

Sowing Seed: Do not use garden soil to germinate seed as it is too heavy and may contain disease organisms. Use a media made especially for seed germination.

Keep Seed Moist: Seed must be kept moist in order to germinate. Water often enough that the media never dries. Using a clear plastic wrap over the top of the container can reduce the amount of watering needed. Remove the wrap after the seedlings emerge.

Light: Most plants will germinate in either darkness or light but some require darkness (Centurea, Larkspur, Pansy, Portulaca, Phlox and Verbena) and others require light (Ageratum, Browallia, Begonia, Coleus, Geranium, Impatiens, Lettuce, Nicotiana, Petunia and Snapdragon).

All plants require adequate amounts of light once emergence occurs. South facing windows may not provide adequate amounts and so fluorescent fixtures are often used. Suspend the lights 2 to 4 inches above the top of the plants and leave the lights on for 16 hours each day.

Temperature: The temperature best for germination is often higher than what we may find in our homes especially since evaporating moisture can cool the germination media. Moving the container closer to the ceiling (top of a refrigerator) can help but a heating mat is best for consistent germination. A companion article lists common plants and their optimum germination temperature. After plants have germinated, they can be grown at a cooler temperature (65 to 70 degrees during the day and 55 to 60 degrees at night). This will help prevent tall, spindly transplants.

Plant Movement: Plants react to movement. Brushing over the plants with your hand stimulates them to become stockier and less leggy. Try 20 brushing strokes per day. However, brushing will not compensate for lack of light or over-crowding. Plants grown under inadequate light will be spindly regardless of any other treatment.

Hardening Transplants: Plants grown inside will often undergo transplant shock if not hardened off. Plants are hardened off by moving them outside and exposing them to sun and wind before transplanting occurs. Start about two weeks before transplanting and gradually expose the plants to outside conditions. Increase the number of hours and degree of exposure over the two-week period. (Ward Upham)

Starting Onion Plants Indoors



It can be difficult to find specific onion varieties in sets or transplants, so growing from seed may be a preferred option. Onions are one of the first plants to be seeded for transplanting because they take a significant amount of time (6 to 8 weeks) to reach transplant size and because they can be set out relatively early (late March in much of eastern and central Kansas). Therefore, we want to start onions in mid- to late-January. Onion seed should be placed $\frac{1}{2}$ to $\frac{3}{4}$ inch apart in a pot or flat filled

with a seed starting mix. Place the container in a warm (75 to 80 F) location until young seedlings emerge. Move to a cooler location (60 to 65 F) when the seedlings are 1 to 2 inches tall. Make sure they have plenty of light, using florescent lights if needed. Start fertilizing when the seedlings reach 2 to 3 inches tall using a soluble fertilizer with each or every other watering.

Onion seedlings tend to be spindly with the remains of the seed sticking to the end of a leaf for several weeks. Encourage stockiness by trimming the ends of the leaves when the plants reach 4 to 5 inches tall. Start hardening off the onions in early March by moving the plants to a protected outdoor location. You may have to move them inside temporarily to protect them from extreme cold snaps. (Ward Upham)

Using Old Garden Seed



Seed stores best if kept in a cold, dark, dry location. We normally consider seed will remain viable for about 3 years under these conditions though there are exceptions. For example, members of the carrot family (carrots, parsnips and parsley) are short-lived and are usually good for only 1 to 2 years. If you are unsure of viability and have plenty of seed, there is an easy method of determining how good your seed is. Place 10 seeds on a paper towel moistened with warm water and cover with a second moistened towel. Roll up the towels and place inside a plastic bag with enough holes for air exchange but not so many that the towels dry quickly. Place the bag in a warm place such as the top of a refrigerator. Remoisten towels with warm water as needed. After the first week, check for germination. Remove sprouted seed and check again after another week. Add these numbers together to determine the percent germination. (Ward Upham)

MISCELLANEOUS

Vegetables and Flowers Seeding Table

The following information was adapted from the North Carolina State Publication titled "Starting Plants from Seeds," HIL-8703



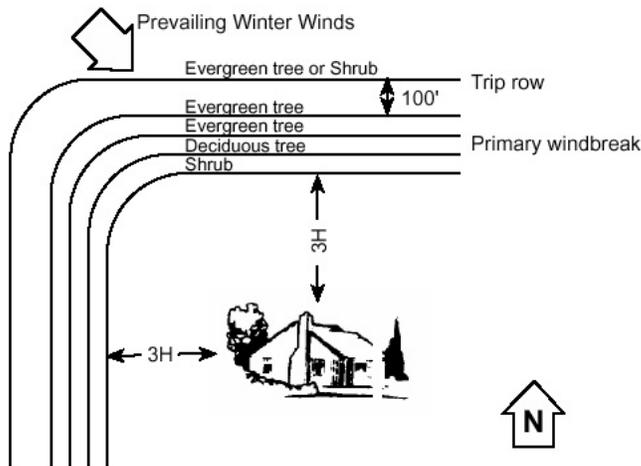
<u>Plant</u>	<u>Time to Seed Before Germination</u>	
	<u>Planting Date*</u>	<u>Temperature**</u>
Ageratum	8	70
Alyssum	8	70
Aster	6	70
Balsam	6	70
Begonia	12 or more	70
Broccoli	8	70
Browallia	12 or more	70
Cabbage	8	70
Cauliflower	8	70
Celosia	8	70
Centuria	6	65
Coleus	8	65
Cosmos	4 or less	70
Cucumber	4 or less	85
Dahlia	8	70
Dianthus	10	70
Eggplant	8	70
Geranium	12 or more	70
Impatiens	10	70
Larkspur	12 or more	70
Lettuce	8	70
Marigold	6	70
Muskmelon	4 or less	85
Nicotiana	8	70
Pansy	12 or more	65
Pepper	8	80
Petunia	10	70
Phlox	8	65
Portulaca	10	70
Snapdragon	10	65
Squash	4 or less	85
Stock	10	70
Tomato	6	80
Verbena	10	65
Vinca	12 or more	70
Watermelon	4 or less	85
Zinnia	6	70

* Number of weeks before transplanting to seed.

** Temperature in degree F

(Ward Upham)

Conservation Trees from the Kansas Forest Service



The Kansas Forest Service offers low-cost tree and shrub seedlings for use in conservation plantings. Plants are one to two years old and sizes vary from 5 to 18 inches, depending on species. Orders are accepted from now through the first full week in May each year, but order early to insure receiving the items you want.

Orders are shipped from the second week of March through May 5. Approved uses for these plants include windbreaks, wood lots, riparian

plantings, wildlife habitat and Christmas trees. They may not be used for landscape (ornamental) plantings or grown for resale.

All items are sold in units. Each single species unit consists of 25 plants. For example, a unit of Eastern red cedar has 25 trees per unit. Though a single species unit is most commonly purchased, four special bundles are also available including a songbird bundle, quail bundle, pheasant bundle and wildlife mast bundle. For details and an order form, go to:

https://www.kansasforests.org/public_saps/Welcome.aspx

Order forms are also available from local K-State Research and Extension offices. (Ward Upham)

Contributors: Ward Upham, Extension Associate

To view Upcoming Events: <http://tinyurl.com/fswqe>

The web version includes color images that illustrate subjects discussed. To subscribe to this newsletter electronically, send an e-mail message to cdipman@ksu.edu or wupham@ksu.edu listing your e-mail address in the message.

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