Selecting and Starting Seeds

Gretel Anspach
Lifetime Master Gardener
Massachusetts Master Gardener Association
The tradeoff

Start seeds because:
• Much more variety
• The latest cultivars
• Cheaper in quantity
• Can get the timing right
• Really cool!

Buy seedlings because:
• Don’t have to fiddle with them all spring
• Takes less space inside
• Cheaper for small quantities
• Instant gratification

Martha Washington Petunia
(may need to buy as seeds)

Rose Wave™ Petunia
(available everywhere)
A compromise

Parsley, Plain Organic

Plain, flat, deeply cut dark green leaves with more pronounced flavor than Extra Curled Dwarf. Certified Organic.

Flat-leaved variety used in salad dressings, poultry, soups and as an ingredient of pesto. Flavor is much more pronounced than that of the more familiar curled type. Certified Organic Seed.

Sun: Full Sun, Part Sun
Height: 15-18 inches
Days to Maturity: 40-60 days
Sowing Method: Direct Sow/Indoor Sow

How to Sow
Sow in full sun after danger of frost. In frost-free areas, sow from fall to early spring. Sow seeds thinly and cover with 1/4" of fine soil. Keep evenly moist. Seedlings emerge in 14-21 days.

- Some seeds can be sown directly outdoors
- It will say somewhere on the web site / catalog
## Direct sowing versus starting indoors

**Often direct sown**
- **Vegetables**
  - Basil, Parsley
  - Beans, Peas
  - Corn
  - Cucurbits (Cucumbers, pumpkins, squash)
  - Leafy greens (lettuce, spinach)
  - Roots (beets, carrots, parsnips, turnips)
- **Annuals**
  - Annual asters
  - Bachelor buttons
  - California poppies
  - Marigolds
  - Nasturtium
  - Sunflowers

**Almost never direct sown**
- **Vegetables**
  - Brassicas (broccoli, cabbage, cauliflower)
  - Celery
  - Leeks. onions
  - Solanaceous (eggplant, peppers, tomatoes)
- **Annuals**
  - Dusty Miller
  - Geraniums
  - Impatiens
  - Pansies / violas
  - Snapdragons
  - Wax begonias

http://extension.missouri.edu/p/G6570
includes a nice table of when to start what, also a good source for more information
What does that mean?

Arikara Sunflower – heirloom

Holiday Sunflower – OP

Sunrich Orange Sunflower – F1

Zohar Sunflower – F1, OG
Terms – Heirloom

• Definition: A cultivar that originated at least 50 years ago
  – Or else at least 100 years ago
  – Or else before 1945
  – Or maybe it’s 1951
  – Or maybe it was just handed down in a family
  – Or maybe it’s just not a hybrid

• For sure:
  – Implication that it has more old-fashioned goodness and less commercial viability
  – Guaranteed it’s open pollinated (not hybrid)
Terms – Open Pollinated vs Hybrid

Open pollinated

First generation hybrid (F1)

2nd generation hybrid (F2)

Four O’Clock (Mirabilis jalapa)
Terms – Organic (OG)

• Definition: Seeds grown per the rules of the USDA National Organic Program
  – Using only certified organic fertilizers and pesticides for several years on that land.
  – Does not mean no pesticides!

• Why buy organic seed?
  – Retain organic certification on your property
  – Support the concept of organic agriculture

• Why not buy organic seed?
  – Costs more (~15%)
  – Organic not always available
  – Minute amount of residual pesticide on seed probably not even measurable on grown plant

<table>
<thead>
<tr>
<th>Size</th>
<th>Cost Conventional *</th>
<th>Cost Organic *</th>
<th>Organic / Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>175 seeds (pkt)</td>
<td>$5.15</td>
<td>$5.40</td>
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</tr>
<tr>
<td>1,000 seeds</td>
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<td>1.36</td>
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<td>5,000 seeds</td>
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<td>$35.75</td>
<td>1.98</td>
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<td>25,000 seeds</td>
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<tr>
<td>100,000 seeds</td>
<td>$243.00</td>
<td>$496.00</td>
<td>2.04</td>
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</table>

* Provider beans, Johnny’s Selected Seeds, January 2022
Getting started

• Decide what to grow – and how much!
• Figure out where to do this.
• Figure out when to do this.
• Get the plants, pots, growing media, etc.
• Read the seed packet
• Figure out when to start
• Get going!
### What are your goals?

<table>
<thead>
<tr>
<th>If your goal is</th>
<th>Organic</th>
<th>Conventional</th>
<th>Species</th>
<th>Open pollinated cultivar</th>
<th>Hybrid cultivar</th>
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<tbody>
<tr>
<td>Saving seeds</td>
<td>OK</td>
<td>OK</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Massive production</td>
<td>OK</td>
<td>OK</td>
<td>Maybe</td>
<td>Maybe</td>
<td>Probably</td>
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<tr>
<td>Disease resistance</td>
<td>OK</td>
<td>OK</td>
<td>Maybe</td>
<td>Maybe</td>
<td>Probably</td>
</tr>
<tr>
<td>Taste / aroma</td>
<td>OK</td>
<td>OK</td>
<td>Maybe</td>
<td>Maybe</td>
<td>Maybe</td>
</tr>
<tr>
<td>Preserving biodiversity - food</td>
<td>OK</td>
<td>OK</td>
<td>Maybe</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Preserving biodiversity - environment</td>
<td>OK</td>
<td>OK</td>
<td>Yes</td>
<td>Maybe</td>
<td>No</td>
</tr>
<tr>
<td>Preserving organic certification</td>
<td>Yes</td>
<td>If organic not available</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
</tbody>
</table>
Do some research – veg

• Production:
  – Cornell Vegetable Growing Guides
    (http://www.gardening.cornell.edu/homegardeningsceneb771.html)
  – New England Vegetable Growing Guides
    (https://nevegetable.org/crops)

• Disease resistance:
  – Web search of disease trials

• Variety / Timing / Flavor
  – Seed Savers Exchange (9,153 tomato listings versus 134 in Johnny’s)
  – Cornell Vegetable Varieties
    (http://vegvariety.cce.cornell.edu/main/login.php)
  – All American Selections
  – (calibrated) Seed Catalogs
Do some research – ornamental

• Which species?
  – Beecology project ([https://gegearlab.weebly.com/plant-list.html](https://gegearlab.weebly.com/plant-list.html))
  – Missouri Botanical Garden plant finder

• Which cultivar?
  – All American Selections
  – Nurseries & botanical gardens
  – (calibrated) Seed Catalogs
Deciding which cultivar to get

Yellow Pear Tomatoes

Sungold Tomatoes
Yellow Pear Tomato

“Enormous number”
“deliciously tangy”.
- Burpee

“tall, vigorous vines”
“Mild flavor”
- Johnny’s Selected Seeds

“loaded with hundreds of
... fruit”
- Territorial Seed Company

Sun Gold Tomato

“sweet-tart
“large clusters”
“sweet and delicious”
- Burpee

“Exceptionally sweet”
“Vigorous plants”
“taste can't be beat”
- Johnny’s Selected Seeds

“flavor is a big hit”
“vigorous indeterminate vines”
- Territorial Seed Company
Read the seed packet!

250-380 seeds per gram: 400 mg = 100-152 seeds
When to start

• Not too early
  – Direct seeded plants may be frost-killed or delayed
  – Indoor seeded plants can take overgrow available space
  – Plants can usually get caught up from a late start

• Consider soil temperature as well as air temperature

• Consider planting date – vacation schedule, etc.
When to start seeds

50% last frost date from derived from “NCDC freeze frost”

Estimated planting dates in zone 5 in http://extension.missouri.edu/p/G6570
Borrow someone else’s schedule
And adapt it for your crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Days to Sow</th>
<th>Temp to Transplant</th>
<th>Temp to Harvest</th>
<th>Plant Outdoor</th>
<th>Harvest Months</th>
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<tbody>
<tr>
<td>Bean - Brinker/Carrier (1)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
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<td>March-November</td>
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<tr>
<td>Bean - Brinker/Carrier (2)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-November</td>
</tr>
<tr>
<td>Bean - Brinker/Carrier (3)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-November</td>
</tr>
<tr>
<td>Corn - Blue Jade</td>
<td>55</td>
<td>NA</td>
<td>70</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Corn - Hjerleid</td>
<td>55</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Corn - Smoke Signals</td>
<td>55</td>
<td>NA</td>
<td>115</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Corn - Tom Thumb</td>
<td>55</td>
<td>NA</td>
<td>85</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Cowpea - Biwa Sitter (1)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Cowpea - Biwa Sitter (2)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Cowpea - Biwa Sitter (3)</td>
<td>60</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Eggplant - Purple Pickling</td>
<td>65</td>
<td>56</td>
<td>90</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Eggplant - Udumolapet</td>
<td>65</td>
<td>56</td>
<td>70</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Leek - Blue Solaise</td>
<td>45</td>
<td>56</td>
<td>110</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Leek - Blue Solaise</td>
<td>45</td>
<td>NA</td>
<td>160</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Lettuce - Australian Yellowleaf</td>
<td>45</td>
<td>NA</td>
<td>50</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Lettuce - Tennisball</td>
<td>45</td>
<td>NA</td>
<td>50</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Every 2 weeks all summer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Melon - Amish</td>
<td>65</td>
<td>NA</td>
<td>80-90</td>
<td>1</td>
<td>March-Oct</td>
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<tr>
<td>Melon - Boule D'Or</td>
<td>65</td>
<td>NA</td>
<td>95-105</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Melon - Ha'Ogen</td>
<td>65</td>
<td>NA</td>
<td>80-90</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Melon - Schoon's Hard Shell</td>
<td>65</td>
<td>NA</td>
<td>88-95</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Okra - Clemsone Spineless</td>
<td>55</td>
<td>NA</td>
<td>56-64</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Okra - Hill Country Red</td>
<td>55</td>
<td>NA</td>
<td>64</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Okra - Silver Queen</td>
<td>55</td>
<td>NA</td>
<td>80</td>
<td>1</td>
<td>March-Oct</td>
</tr>
<tr>
<td>Okra - Star of David</td>
<td>55</td>
<td>NA</td>
<td>61</td>
<td>1</td>
<td>March-Oct</td>
</tr>
</tbody>
</table>

March November October September August July June May April

21
Cost

4” plastic pot  
29c each

Seed starting mix  
$11.50/8 quart bag

Tomato seeds  
$2.49/pack  
(35-40 seeds)

<table>
<thead>
<tr>
<th>Number of plants</th>
<th>Pots</th>
<th>Seed starting mix</th>
<th>Seeds</th>
<th>Total cost</th>
<th>Cost per plant</th>
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<tbody>
<tr>
<td>1</td>
<td>$0.29</td>
<td>$11.50</td>
<td>$2.49</td>
<td>$14.28</td>
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<td>20</td>
<td>$16.00</td>
<td>$11.50</td>
<td>$2.49</td>
<td>$29.99</td>
<td>$1.50</td>
</tr>
</tbody>
</table>
Required Equipment – “Dirt”

• Seed Starting Mix a.k.a. Soil-less mix
  – Sterile – no fungus, no bugs
  – Very light – easy for seedlings to push through
  – Generally peat moss, perlite, vermiculite

• You can use potting mix
  – Generally heavier, a bit harder for seedlings to deal with

• DO NOT USE garden soil
Required Equipment - Pots

- Jiffy-7
- Peat pots
- Newspaper pots
- Plastic flower pot
- 20 row seedling flat
- Flower pot
- Large flat

Seed starting
- One plant per pot
- Many plants per pot

Final stage
- One plant per pot
Required Equipment - Fertilizer

• Any balanced liquid fertilizer will do
  – Balanced means that the three numbers (Nitrogen, Phosphorus, Potassium) are about the same (e.g. 5-5-5)
Required Equipment – Misc.

Labels
- Label when you plant, not the next day, because
  - You will not remember which seeds you planted where, and
  - All seedlings look alike

Watering tray
- Seedlings need to be watered a lot
  - Bottom watering is best
Equipment you probably need - Light

If you have a sunny window or a greenhouse, you may not need supplemental light.

Otherwise get a 4’ shop light:
- Cool white bulbs
- Each light handles an area about 1’ wide x 3.5’ long
- Light is cool so it can be adjusted to almost touch the plants

http://resources.yesican-science.ca/tomatosphere/final/trans_absorption_band1.html
Another reason for artificial light
Optional Equipment - Heat

• Seeds germinate fastest if soil temperature is about 75 degrees

• Options:
  – Radiator, refrigerator with heating element on top
  – Seedling heat mat (~$25)
  – Don’t bother (they’ll germinate soon enough)

<table>
<thead>
<tr>
<th>Plant</th>
<th>Advertised germination time</th>
<th>Actual w/ heat mat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyssum</td>
<td>7 days</td>
<td>2 days</td>
</tr>
<tr>
<td>Calendula</td>
<td>10-14 days</td>
<td>2 days</td>
</tr>
<tr>
<td>Chamomile</td>
<td>7-14 days</td>
<td>3 days</td>
</tr>
<tr>
<td>Geranium</td>
<td>14 days</td>
<td>3 days</td>
</tr>
<tr>
<td>Kale</td>
<td>5-10 days</td>
<td>2 days</td>
</tr>
<tr>
<td>Lettuce</td>
<td>2-14 days</td>
<td>2 days</td>
</tr>
<tr>
<td>Marigold</td>
<td>7 days</td>
<td>2 days</td>
</tr>
</tbody>
</table>
How many seeds to start?

• Consider
  – How many plants you want
    • Area
    • Plant separation
  – Germination rate

• For example

<table>
<thead>
<tr>
<th></th>
<th>Rows/bed</th>
<th>Separation in row</th>
<th>plants per bed-foot</th>
<th>Germination rate *</th>
<th>seeds per bed-foot</th>
<th>Row length</th>
<th>Start this many seeds</th>
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</thead>
<tbody>
<tr>
<td>Eggplant</td>
<td>1</td>
<td>24&quot;</td>
<td>0.5</td>
<td>60%</td>
<td>0.83</td>
<td>20</td>
<td>17</td>
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<tr>
<td>Leek</td>
<td>4</td>
<td>6&quot;</td>
<td>8</td>
<td>60%</td>
<td>13.33</td>
<td>20</td>
<td>267</td>
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<tr>
<td>Pepper</td>
<td>1</td>
<td>18&quot;</td>
<td>0.67</td>
<td>55%</td>
<td>1.22</td>
<td>20</td>
<td>24</td>
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<td>Tomatillo</td>
<td>1</td>
<td>24&quot;</td>
<td>0.5</td>
<td>50%</td>
<td>1.00</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Tomato</td>
<td>1</td>
<td>24&quot;</td>
<td>0.5</td>
<td>75%</td>
<td>0.67</td>
<td>20</td>
<td>13</td>
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</tbody>
</table>

* Germination rates from http://www.webgrower.com/information/seed_germ_standards.html
What’s in a seed?

Bean Seed

Corn Seed

- Seed leaf (Cotyledon)
- Root (Radicle)
- Stem (Hypocotyl)
- First true leaf (Epicotyl)
- Seed coat (Testa)
- Pre-emergent food (Endosperm)
- Seed leaf (Cotyledon)
- First true leaf (Epicotyl)
- Seed coat (Testa)
- Stem (Hypocotyl)
- Root (Radicle)
How seeds sprout

1) The seed is planted. The seed coat begins to absorb water.
2) The root pushes through the seed coat into the soil.
3) More roots begin to develop. The stem forms a hook pulling the seed through the surface of the soil.
4) The stem straightens out, pulling the rest of the seed above ground.
5) The seed opens and the seed leaves deploy. The seed coat may drop off.
6) The stem gets longer and the first true leaves emerge. The seed leaves eventually fall off.

Diagram:

Needs water and air

Needs sunlight

Needs nutrients
Growing 1 Pepper - planting

• Start in late March or early April
• Pour hot water on a Jiffy-7 pot till the pot puffs out and looks dark
• Make sure the pot is right-side up.
• Scratch a shallow hole in the top of the pot
• Drop in 2 seeds
• Shove the dirt over the seeds and squeeze a bit to make sure there is good soil-seed contact.
Growing 1 Pepper - germinating

• Keep an eye on the pot, looking for a bit of green poking up from where the seeds went in
• If you put the pot over a heat source (~ 70 degrees) the seeds will germinate quicker.
• Add water (bottom-water) if the pot doesn’t feel cool.
Growing 1 Pepper – early growth

- Put the pot in a very bright window and rotate the pot every few days to keep the seedlings growing up. OR
- Put a fluorescent light directly above the seedlings (1 inch away)
- Water the pot when it feels warm.
- When the true leaves appear, add half-strength liquid fertilizer every time you water.
Growing 1 Pepper – the tough part

• With scissors, cut off the weaker of the two seedlings at the base.
• The alternative is to plant only one seed per pot, and throw out the pots where no seed germinated.
Growing 1 Pepper – transplanting

• When the roots grow through the side of the pot, it’s time to put the seedling in a larger pot.
• Put about 1” of potting mix or seedling mix in the bottom of a 4” pot and firm it down.
• Strip the plastic mesh off the outside of the peat pot and set in the larger pot.
• Add more potting mix to fill the pot. The seedling should be planted at the same depth as before, and there should be ¼” to ½” space at the top of the pot for watering.
• Water the pot till the water runs out the bottom.
Growing 1 Pepper – more growing

• Put the pot in a very bright window and rotate the pot every few days to keep the seedling growing up. OR
• Put a fluorescent light directly above the seedling (1 inch away)
• Water the pot when the soil feels warm. Add half-strength liquid fertilizer every time you water.
Growing 1 Pepper – hardening off

• About 1 week before you want to plant the outside, start hardening the plant off.
• Place the plant outside in the shade (tree shade, house shade, shade-cloth, etc)
• Water the pot when the soil feels warm. Add half-strength liquid fertilizer every time you water.
Growing 1 Pepper – planting out

• Dump the seedling out of the pot. If any roots are wrapping around the inside of the pot, pull them loose.
• Plant the plant in moist garden soil, preferably on a cloudy day.
• Water the plant in after planting to eliminate air pockets.
• Water weekly unless it rains.
Growing 25 Peppers - planting

• Start in late March or early April
• Fill a 4” pot with moist seedling mix.
• Scatter the seeds over the top of the soil.
• Cover the seeds with ¼” of seedling mix and firm it down to make sure there is good soil-seed contact.
Growing 25 Peppers - germinating

• Keep an eye on the pot, looking for a bit of green poking up from where the seeds went in.

• If you put the pot over a heat source (~ 70 degrees) the seeds will germinate quicker.

• Add water (bottom-water) if the pot doesn’t feel cool.
Growing 25 Peppers – early growth

• Put the pot in a very bright window and rotate the pot every few days to keep the seedlings growing up. OR

• Put a fluorescent light directly above the seedlings (1 inch away)

• Water the pot when it feels warm.

• When the true leaves appear, add half-strength liquid fertilizer every time you water.
Growing 25 Peppers – transplant

- When the seedlings in the pot look crowded, it’s time to separate them.
- Slide the root ball out of the pot and drop it gently on its side. This will loosen the root ball.
- Grab each seedling by a seed leaf and tease it out of the clump.
- Plant the seedling at the same depth it was growing in seed starting mix or potting mix in a larger pot.
- If you put each seedling in a 2” pot, you will need to repot them again. If you put them in a 4” pot, it will take up a lot of space for a much longer time.
Cold Stratification

- Late fall / early winter plant seeds in damp sand or peat or 50-50 blend
- Store pot in fridge for at least 2.5 months
- Remove from fridge, add light, and start growing
- Or else plant outside in fall

Recommended for:
Milkweed (*Asclepias*)
Lupine (*Lupinus*)
Pincushion Flower (*Scabiosa*)
Perennial sunflowers (*Helianthus*)
Spider Flower (*Cleome*)
...and many more
Soaking or Scarring

- Soak seeds overnight just before planting, or
- Scratch seed coating with sandpaper or knife

Recommended for:
- Joe Pye Weed
- Lupine
- Milkweed
- Morning Glories
- Nasturtiums
...and many more
To cover, or not to cover

- Some seeds require light to germinate
- Some seeds require dark to germinate
- Some are somewhat flexible

<table>
<thead>
<tr>
<th>Light (1)</th>
<th>Germination Temperature (2)</th>
<th>Growing Temperature (2)</th>
<th>Crop Time (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>70-75</td>
<td>60-65</td>
<td>8-10</td>
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<tr>
<td>C</td>
<td>70-75</td>
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</tbody>
</table>

L = requires light
C – cover
LC – lightly cover

https://hortnews.extension.iastate.edu/2017/01/seed-germination-guide
Marigolds

“Sow in average soil after danger of frost” means time from seed to bloom is relatively short (6-8 weeks)
“Sow outdoors where they are to flower” means they hate to have their roots disturbed. The “growing 1 ...” approach will work. The “growing 25...” will not.
What can go wrong

• Dry seedling mix / potting soil will shed water. If you start seeds in dry mix, get a mister and keep misting the soil with warm water till it finally starts absorbing the water.

• If you get the seeds wet and then let them dry out, they will die. They are very vulnerable from the time growth starts till when the first 2 true leaves appear.

• If you don’t give the plants enough light, they will get very gangly. You can mitigate this somewhat when the plant is bigger by pinching the plant to encourage branching, but it is better to avoid.

• If you let the plant get root bound, it will never be as strong as if you can let it grow unbound.

• If you cover the seeds with a clear dome, it increases the chances of damping-off disease.
Questions?
What is “sufficient” separation?

<table>
<thead>
<tr>
<th>Common names</th>
<th>Separation</th>
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<tbody>
<tr>
<td>Allium ampeloprasum</td>
<td>Leeks</td>
</tr>
<tr>
<td>Beta vulgaris</td>
<td>Beets, Swiss Chard</td>
</tr>
<tr>
<td>Brassica oleraccea</td>
<td>Broccoli, Brussels Sprouts, Cauliflower, Cabbage, Kale</td>
</tr>
<tr>
<td>Brassica rapa</td>
<td>Turnip</td>
</tr>
<tr>
<td>Capsicum annuum/baccatum/frutescens</td>
<td>Peppers</td>
</tr>
<tr>
<td>Citrullus lanatus</td>
<td>Watermelon</td>
</tr>
<tr>
<td>Cucumis melo / sativa</td>
<td>Melons, cucumbers</td>
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<tr>
<td>Cucurbita argyrosperma / maxima / ficifolia / moschata / pepo</td>
<td>Squash, pumpkins, gourds</td>
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<td>Daucus carota</td>
<td>Carrots, Queen Anne's Lace</td>
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<tr>
<td>Eruca sativa</td>
<td>Arugula</td>
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<td>Lactuca sativa</td>
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<td>Peas</td>
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<td>Solanum lycopersicum / pimpinellifolium</td>
<td>Tomatoes</td>
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<tr>
<td>Solanum melongena</td>
<td>Eggplant</td>
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<tr>
<td>Zea mays</td>
<td>Corn</td>
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