Seed Starting

FOR A GLORIOUS GARDEN

Cornell Cooperative Extension | Tompkins County
Seeds are magical little packets of life!
Five categories of vegetable seed sowing

- **Direct Seeded Cool Crops**
- **Transplanted Cool Crops**
- **Direct Seeded Succession Crops**
- **Direct Seeded Warm Crops**
- **Transplanted Warm Crops**
Anatomy of a Seed Packet

**High Mowing Organic Seeds**

**Dragon Carrot**

*Organic, Non-GMO, Open-Pollinated*  
85 days to maturity  
1/32 ounce | sows - 20 ft | Item: 2225  

**Carrot**  
*Daucus carota*

**Dragon** Vibrant purple skin with orange flesh; unusual yellow core and spicy-yet-sweet flavor! Roots are full size at 7” long, thrive in heavy soils and are very hardy.

**Planting Tips** Carrots are hardy biennials. Best quality arises from raised beds with loosened soils. Direct seed as soon as soil can be worked in the spring through mid-summer. Optimal soil temperature for germination is 65–75°F. Harvest at baby stage or full size. Cut tops for improved storage in refrigerator.

- Store seeds in a cool, dry place -

**High Mowing Organic Seeds**  
76 Quarry Road | Wolcott, Vermont 05880 | 802-472-6174  
www.highmowingseeds.com

Certified Organic by Vermont Organic Farmers, LLC.
Anatomy of a Seed Packet

Breeding system

Variety Name

Days til harvest
Anatomy of a Seed Packet

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Scan QR code for our latest news and information.

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High Mowing Organic Seeds is an independently owned, farm-based seed company committed to sustainable agriculture since 1996.
## Anatomy of a Seed Packet

<table>
<thead>
<tr>
<th>Seed Planting Depth</th>
<th>Seed Spacing</th>
<th>Days to Germination</th>
<th>Plant Spacing After Thinning</th>
<th>Row Spacing</th>
<th>Plant Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 inch</td>
<td>30–40 seeds/ft</td>
<td>7–20 days</td>
<td>1 inch</td>
<td>18 inches</td>
<td>10–24 inches</td>
</tr>
</tbody>
</table>
Materials

- Seed starting mix
- Tub to contain potting mix
- Warm water
- Seeds!
- Soil block OR seed trays
- Bottom trays
- Labels
- Waterproof marker or pencil
7 Essential Seed Starting Tips
(and simple solutions to 5 common mistakes)
1. Resist starting everything at once!
For healthy seedlings, timing is everything.
2. Start seeds at the right time.

Too early = More work!
- You pot up more often as they grow
- Plants more likely to be stressed
- Stressed seedlings = less harvest

Right time = Less work!
- Plants less likely to be stressed
- Healthy seedlings = more abundance
3. Soil blocks are best.
soil blockers are easy and fun to use

- more soil + nutrients per volume
- naturally air-pruned roots
- healthy happy seedling

Cell trays are second

- less soil + nutrients per volume
- roots circle around cell = root bound
- easily stressed seedling
4. Remove air gaps.

For cell trays, tamp down gently.

- more soil + nutrients = healthier seedling
- roots transplant well

- less soil + nutrients = stressed seedling
- roots transplant poorly
5. A heat mat changes everything.

- constant warmth
- speeds germination
- increases germination rate

"Once you invest in a heat mat you will wonder why you didn't years ago."

- soil easily dries out, be sure to keep moist

- if your plants start to lean toward the window, it’s too late

- invest in full-spectrum LED lights rather than less effective fluorescent 'grow lights'
7. Healthy seedlings are: short, stout & deep green.

- short & stout = plenty of light
- deep green = plenty of light & nutrients

“Once your seedlings are leggy, it’s best to start over.”

- leaning, leggy seedling = need more light
- pale plants = need more light + nutrients
1. Egg cartons are great for eggs.

- little soil for growth beyond germination
- dries out easily
- curves damage fragile roots when potting up
2. Sow 2-3 seeds in each soil block or cell.

Optimize your time and space.

“Use scissors to thin seedlings to maintain healthy roots.”

ample nutrients & light = health

competition for nutrients & light = stress
3. Bottom-watering is your new best friend.

- Maintains soil & seeds
- Keep moisture at the roots (where you want it)
- Top watering displaces soil & seeds
- Encourages 'damping off' and other diseases
4. Acclimate your seedlings.

Transition your seedlings to life outside 5-7 days before transplanting:

- gradually increase exposure to direct sunlight
- reduce watering
- foster resilience in fluctuating temperatures
- bring frost-sensitive seedlings back inside if nights may freeze
- bring solanaceous seedlings back inside if it nights are under 50 F
5. Everyone Makes Mistakes. Mistakes are inevitable and great opportunities to learn.
Direct Seeded Spring Crops
Crop to sow cool and grow cool—direct seed

- Spinach
- Tatsoi
- Arugula
- Radishes
- Salad turnips
- Peas!
Crops to start inside and transplant as soon as soil is workable

- Lettuce (warm season)
- Parsley
- Broccoli
- Cauliflower
- Brussel Sprouts
- Kale
- Radicchio
- Endive
- Leeks
Beets & Carrots

- seed anytime between May and early August
- seed carrots thickly and then thin to 1 inch apart
- all root crops are direct seeded

Warm Germinating Crops

Be vigilant about keeping moist while waiting for germination
Warm Germinating Crops

Sow late May through late July

Corn and Beans

- Sow any fresh eating bush bean seed in rows every 3-4 inches, thinning to every ~6 inches.
- Add inoculant to beans to increase germination and yield

Keep moist while waiting for germination
Warm Germinating Crops

Quick growing annual herbs
- Dill
- Basil
- Cilantro

Sow May through early August

Be vigilant about keeping moist while waiting for germination
Warm Germinating Crops

Sow May through early August

Squash family (Cucurbitaceae)

- Cucumbers
- Zucchini
- Winter squash
- Pumpkins
Annual flowers to direct seed

- Sunflowers
- Zinnias
- Cosmos
- Calendula
- Poppies
Succession Crops

Every 3-4 weeks
- String Beans
- Zucchini
- Cukes
- Basil
- Carrots
- Beets

Every 2-3 weeks
- Cilantro
- Dill
- Mesclun/Salad Mix
- Lettuce
Materials

Optional but awesome:
- Full spectrum LED lights
- Heat Mats
Containers

- Cell packs
- Cell trays
- Yogurt containers with holes in the bottom for drainage
- Older spinach/salad mix containers
- Cow pots
- Peat pots
- NO egg cartons
- My favorite: soil blocks!
Things to consider while seeding

- Soil Temperature
- Sowing Depth
- Seed to Soil Contact
- Water
- Fertility