



Patty's Plants

February Newsletter 2010 Seed Starting

2010

Why Start Seeds? Why Not?

Inside this issue:

Supplies Needed	2
Choosing Seeds	2
Planting Seeds	2
Lighting: The Key	3
Damping Off & Natural Solutions	3
Hardening Off, Scoring and Cold Treatment	4
Commonly Requested Seed Definitions	5

There are many reasons to start your own seeds. To save money, growing hard to find plants, to get a heads start on spring, in our area some seeds need a jump start. But one of the best answers I can think of is that it is fun! Experiencing and experimenting on the whole growing cycle. Watching the tiny newborn seedlings grow from a lifeless seed into plants that will give us joy and/or food. Sure there may be some failures. Damping off, mold on the soil, leggy seedlings, these are part of the learning experience. In this newsletter, I will give tips on starting your own seeds. Prevention of the evil damping off disease is one of the most important aspects. One day you have beautiful seedlings growing and the next they are all laying over. I've said this before but it really is heart-

breaking. I have a couple of organic homemade recipes for this that my grandmother used to use. There are many seeds that can be directly planted outside. I will include the list of those so you don't take up your space and time growing plants indoors that can be planted with ease and much success outside. Here are a couple of products I carry to make seed starting easier.

Happy Gardening!

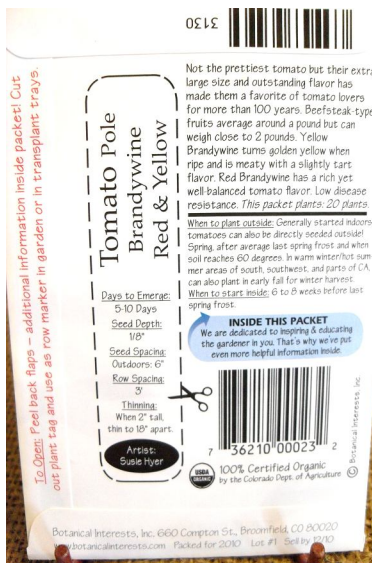
Patty



What is the Best Time to Start?

You must think backwards when you're thinking of starting seeds. Our average last frost date is between the 15th and the 20th of May. Look at the number of weeks listed on the seed package on how many days it takes to emerge and when it says most seeds should be started. Then count backwards on the calendar from the average last frost date. Most seeds should be started six to eight weeks before the last frost date. Some seeds can be started a few weeks before it, while

others may need 12 to 14 weeks. If you start seeds too early, you will have to keep the seedlings inside too long, and they will become to leggy and weak to transplant outside. It is really important to read the seed packet. Seedlings shouldn't be put outside until the ground warms up and the average temp. is in the mid-50's at night. You must also factor in the time it takes to harden them off. I will talk more about hardening off later in this newsletter.



What Are the Supplies I Need?

You will need to start with good **quality seed and seed starting mix**. Most seed starting mixes are sterile and blended to be light and porous so fragile seedlings get both the moisture and the oxygen they need to thrive. If it is not sterilized, you can do this by baking the mix in the oven. Here's how:

Spread soil not more than four inches deep in non-plastic containers, clay pots and glass or metal baking pans. Cover each container tightly with aluminum foil. Insert a meat or candy thermometer through the foil into the center of the soil. Set the oven between 180° and 200° F. Heat the soil to at least 180° F; keep at this temperature for 30 minutes. Do not allow the temperature to go above 200° F. High temperatures may produce plant toxins. After heating, cool, remove containers from the oven and leave aluminum foil in place until ready to use. **The heated soil will give off an odor, basically it stinks.** Containers for seed starting should be 2 ½ - 3 inches tall.

Use commercial seed starting containers or recycled household items like milk cartons, yogurt cups, or aluminum pans. Whatever you choose be sure to punch holes in the bottom for drainage. I carry some of these products: OMRI Listed Black Gold Seedling Mix, Dot Pots, Nesting Pots and Coir Pots.



Which Seeds Should I Start Inside?

Vegetable Seeds: February 15th is the time to start onion seeds indoors. Around March 15th is a good time to start most of these veggies from seed: broccoli, brussels sprouts, cauliflower, celery, and eggplant. April 1st start peppers and April 15 start tomatoes.

Flower Seeds: January, for impatiens, geraniums, mums, pansy. February for gazania, lupine, hibiscus, foxglove, columbine, delphinium, pinks, bee balm, daisy. March

plant coleus, polka dot, nicotina, flowering maple and cosmos.

Herb Seeds: basil, chives, lemongrass, parsley and thyme, do best started indoors in the middle of March.

My archived newsletter for February 2009 also has some seed starting info along with what to do about fungus gnats. You can find it at www.pattysplants.com

How Should I Plant The Seeds?

Planting: Make sure your soil is moist but not to wet. Fill your containers to the top with the moist mix. Firm the top of the soil to make sure it doesn't sink after watering. Scatter small seeds evenly over the surface. If the seed needs to be covered (according to the seed packet) do so, gently press seeds into the mix and scatter a little mix over the seed. Lightly press the mix down. For larger seeds use a pencil eraser to push the seed down to the desired depth. Be sure to label your pots, many seedlings look exactly the same when small.



wet or too dry will not grow well. You can use a spray bottle to water the seeds in with a fine mist. Cover it with plastic wrap or a Humidity Dome until they germinate.

Temperature: The recommended soil temperature range for most seeds started indoors is 75 degrees F to 90 degrees F. If room temperature is about 70 degrees F, you may need to place containers in a warm spot, such as near a kitchen stove, heat vent, or on top of the refrigerator. A seedling heat mat is ideal. After germination, slightly cooler temperatures will slow down growth and result in stockier plants. Seedlings kept too warm will grow too fast, get weak and leggy.

Watering: Keep the soil moist during germination, as well as after germination and during the growing phase. Never over soak your seeds or seedlings. Seeds that are kept too

Lighting: Is It The Key?

Just as soon as any baby seedlings begin to emerge out of the soil it's critical to give them light right away. Remove any covering immediately and provide a strong light source. If all you have is a south-facing windowsill it will have to do. Grow lights or a fluorescent shop light suspended from chains with hooks so you can move the lights up as the plants grow is better. Suspend the light just 1 or 2 inches above the seedlings and it will provide both light and warmth. (Once germinated, seedlings will grow happily at 70 – 80 degrees.

As the seedlings grow, move the lights up, keeping them just a few inches above the tops of the plants. If you are

growing them in a sunny windowsill make sure you rotate the plants every few days so they don't start reaching for the light. Seedlings that are stringy looking, weak or pale are not getting enough light. There should be no more than an inch of stem between the surface of the soil and the first little leaf. You may leave artificial lights on for 12 to 16 hours a day. With warm conditions and enough light, seedlings will grow fast.



South window or lighting is a must!

Why Did All My Seedlings Die?

I had this in the 2009 newsletter but thought it important enough to add it again this year. Sometimes it's easier to redo than to have everyone figure out which newsletter I had it in before.

Damping off is one of most depressing things that can happen when starting your own seeds. Your seedlings are all coming up nicely, you check them before going to bed, there's a smile on your face, sweet dreams. The next morning you hurry to look at your new seedlings (even before making coffee). With a smile on your



face, you see them, the smile is turning upside down. You want to scream, cry or both. They were standing last night, now they're all flopped over. Gone, they are all gone. All that time and work, what happened? Damping-off is what happened. It is a fungal disease that can kill seedlings overnight. The fungus rots the stems at the soil surface, causing the seedlings to fall over and die. Why did this happen? Too crowded, too wet, soil too cold, soil too heavy, bad seeds, there are a number of reasons this might have happened.

Natural Preventative Solutions For Damping Off

Natural Preventative Solutions

Don't plant too close together or snip off extra seedlings early. Being over crowded can lead to damping off. Make sure your soil isn't staying too wet. Put a small fan near by to keep air moving.

Warm the soil to help seeds germinate and grow faster. Use a heating mat or put them on top of the refrigerator for bottom heat.

Chamomile Spray: My Grandmother used Chamomile tea. It is an excellent preventative for damping-off. Chamomile is a concentrated source of calcium, potash and sulfur. The sulfur is a fungus fighter. This can also be used as a seed soak before planting.

Pour 2 cups boiling water over 1/4 cup chamomile blossoms. Let steep until cool and strain into a spray bottle. Use as needed. This keeps for about a week before it goes bad. Spray to prevent damping off and anytime you see any fuzzy white growth on the soil. Chamomile blossoms can be purchased at health food stores and usually grocery stores.

Cinnamon is another solution my grandmother used. She used cinnamon for everything from this to keeping tiny sugar ants (as she called them) out of her cupboards. It acts as a natural fungicide. She said it was the best damping off remedy for her. Sprinkle powdered cinnamon on the soil surface. Don't worry if you get cinnamon on your plants as it will not hurt the tender seedlings.

Compost Tea When you water or mist, use a solution of compost tea. I carry this in tea bag form, ready to go, easy to use.

Sand or Perlite Sprinkle a thin layer of sand or perlite on the surface of the soil. This step will keep the stems dry at the soil surface where damping off occurs.

These are all suggestions to try. Some people believe in them others don't. They can't hurt to try and they could put that smile back on your face.

Why Do I Need To Hardening Off My Plants?

Hardening off means you need to acclimate your seedlings so they can adjust to real sunlight, wind and cooler temperatures. They are very tender and could be burned by a nice sunny day or shocked by cold wind. Here's how to harden off your seedlings:

Place them outside in a protected area with filtered light. Start with 2-3 hours of sun gradually lengthening the time and giving more and more sun exposure. Bring them inside or cover them during

cold nights. If it's raining out make sure you remove any saucer or container that might hold water, you don't want to drown your new seedlings after getting this far. In a couple of weeks they will be strong enough and ready for planting in the garden. Don't forget to watch the weather for possible frosty nights. As far as any plants you may want to move out in the early spring, follow the same process. Tropicals need night temperatures in the up-

per 50's to low 60's.

These are the temperatures when some veggies can start to go out for hardening off:

Hardy

40° F. Broccoli, Brussels sprouts, kohlrabi, cabbage, onions, leeks, parsley

Half-Hardy

45° F. Celery, Chinese cabbage, lettuce, endive

Tender

50° F. Squash, pumpkin, sweet corn

60° F. Cucumber, muskmelon

65° F. Basil, tomatoes, peppers

What Is Scoring The Seed?

Some seeds have very hard shells and need to be scored also called **scarification**. This is a nicking or scratching of the coat to allow water to enter so the seed to germinate. The best results are from lightly nicking the seed so that water will enter, then seed will begin to swell. Many failures are due to over-nicking and damaging the seed.

Lightly rub the seed with sandpaper

or a file until just the very outer coat is scratched. Scratching with a knife-point or scribe tool works too, just don't go too deep. Some seeds only need to be soaked overnight.

This tricks the seed into thinking it was planted longer and helps it germinate faster.



Usually the seed package will tell you whether it needs it or not.

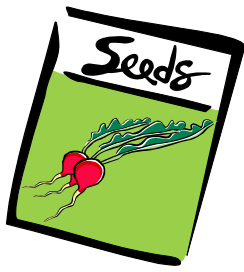
Here are a few that might need it: Hollyhock, Indigo, Lupine, Sweet Pea, Mallow, Morning Glory, Nasturtium, Beans, Beets, Celery, Impatiens, Mimosa, Pansy, Parsley, Peas.

Do Some Seeds Need A Cold Period?

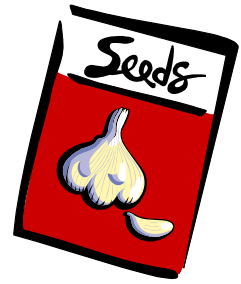
Yes, there are seeds that need a cold treatment. This is called **stratification**. One way to stratify seeds is to soak the seeds for up to 24 hours and combine them with a mix of moist coir or peat and sand in a plastic bag. Place the mixture in the refrigerator and keep at a temperature of (34°-41° F) for 4 to 12 weeks. Read the seed packets carefully, they should tell you this information. Here are just some of the seeds that need this. *Aquilegia*

vulgaris (14-21 days)- Columbine, *Asclepias curassavica* (14-21 days)- Blood Flower, *Cleome hasslerana* (14-21 days)-Cleome, Purple Queen, *Delphinium elatum* (14-21 days)- Delphinium, *Lobelia cardinalis* (56-70 days)-Cardinal Flower, *Salvia spp.* (14-21 days) Sage, Silver Downy Leaf, Texas Hummingbird, Victoria. *Asclepias tuberosa*-Butterfly Weed (14-21 days) *Echinacea spp.*-Coneflower, Yellow,

Purple, Pale Purple (21-60 days) *Lavandula viridis* -Lavender (14-40 days) *Lobelia siphilitica* (56-70 days) *Melissa officinalis*-Lemon Balm (14-21 days) *Veronicastrum virginicum*-Culver's Root (14-21 days)



Southern Wisconsin Vegetable Planting Guide



<u>Vegetable</u>	<u>Planning Time</u>	
	Indoors	Outdoors
Asparagus		April 15
Bean, bush lima		May 25
Bean, bush & pole		May 10
Beet		April 15
Broccoli	March 15	(Plants) May 1
Brussels sprouts		(Seeds) May 15
Cabbage, early	March 15	(Plants) May 1
Cabbage, late		(Seeds) May 15
Carrot		April 15
Cauliflower	March 15	(Plants) May 1
Chard		April 15
Corn		May 10 & May 25
Cucumbers		(Seeds) June 1
Eggplant	March 15	(Plants) June 1
Kohlrabi		April 15
Lettuce, leaf	March 15	(Plants) May 1
Muskmelon	May 1	(Plants) May 20
Onion	Feb. 15	(Plants) May 1
Onion sets		April 15
Parsnip		April 15
Pea		April 15
Pepper	April 1	(Plants) June 1
Potato, early, midseason		April 15
Potato, late		April 15
Pumpkin	May 1	(Seeds) May 10 (Plants) May 20
Radish		April 15
Rhubarb		April 15
Spinach		April 15
Squash, summer		May 20
Squash, winter	May 1	(Plants) May 20
Tomato	April 15	(Plants) May 20
Watermelon		May 20

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Natural & Organic Garden Supply

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Patty's Plants

Seed Germination Problems

Seeds may not sprout if a) unusually cool or wet weather occurs, b) if planted too early when soil temperatures haven't warmed up sufficiently, c) if seeds are not sown at the recommended depths and/or d) if seeds are not kept consistently moist. Extensive sowing information is included on the outside or inside of seed packets!

Botanical Interests Inc.

COMMONLY REQUESTED DEFINITIONS

GMO: (Genetically Modified Organism) Botanical Interests does not carry genetically modified varieties. Genetically modified varieties have had their DNA scientifically altered to make them more pest, disease, or chemical resistant. GMO seeds are controversial because no one is sure of their long term effects on the environment and humans.

Hybrid: A variety created by crossing two separate varieties to achieve desirable characteristics. A hybrid tomato, for example, may have been created to have excellent disease resistance, produce uniform, prolific fruit, or have superior flavor. If you save the seeds from a hybrid, though, the resulting fruit next year may revert back to the characteristics of one of its parents.

Open-pollinated: Varieties that are pollinated naturally by wind or insects without human intervention. Saved seed will be true to the original variety.

Heirloom: An open-pollinated seed variety that has been passed down through the generations for at least 50 years.

Organic: Organic refers to the way agricultural products are grown and processed. Organic seed, much like organic food production, is based on a system of farming that maintains and replenishes soil fertility without the use of toxic pesticides and inorganic fertilizers. This ecological management system promotes and enhances biodiversity, biological cycles, and soil biological activity. Botanical Interests' organic seed is "Certified Organic" which means that their seed and packaging facility have been inspected and meet strict standards set forth by the USDA (United States Department of Agriculture).

Resource: Botanical Interests Inc.

Patty's Plants New Line of Seeds, go to:
www.pattysplants.com for variety list.