**Organic Vegetable Gardening: A Five-Part Series in Growing Your Own Food**

Wed, February 20th, 2018, 6pm to 8:30pm

Marybeth Janerich, Community Education Program Director, Wasatch Community Gardens

Grateful Tomato Garden field trip is on Saturday, March 9th from 2-4pm.

**Cool vs Warm Season Crops**

* Cool Season Crops: vegetables that grow best when the temperatures are about 60-65 degrees. These are crops that you plant in the spring (or in the late summer), such as peas, fava beans, lettuce and other salad greens, spinach, Swiss chard, kale, onions, leeks, carrots, turnips, beets.
	+ Soil temperature must be cool enough for the seeds to germinate.
	+ Plant as soon as the soil can be worked (without damaging soil structure) in spring.
	+ Most cool-season crops are best sown directly out in the garden from seed. Longer-maturing crops such as broccoli and cauliflower should be started indoors in January and planted out in spring as seedlings.
	+ Some cool-season crops are planted as tubers (potatoes), sets (onions), starts (onions, various long-maturing brassicas) or crowns (asparagus, rhubarb)
	+ Can sow cool-season crop seeds like peas, greens, and carrots again in late July/early August (by lowering soil temp) for a fall/winter harvest
	+ How to sow seeds:
		- Follow instructions on seed packet for:
			* Seed depth (3x the width of the seed)
			* Seed spacing in the row
			* Distance between the rows
				+ Or – broadcast seeding
				+ We’ll practice both in “Sowing Spring Crops” workshop on March 23rd
			* Fun article on how to read a seed packet: <http://www.tigersandstrawberries.com/2011/04/22/how-to-read-a-seed-packet/>
	+ A bit about starts, sets, tubers, & legumes:
		- Brassica or other cool-season starts = seedlings that have started from seed indoors and allowed to grow to suitable size for planting out. Available at many nurseries. Special set-ups required for doing this at home.
		- Onion starts vs. sets
		- Garlic – plant in fall and harvest in July. If spring-planted, heads will be very small
		- Potatoes – plant from certified disease-free tubers, aka “seed potatoes,” which are not seeds ☺
			* Greensprouting = chitting = waiting for eyes to form before planting
			* Can cut large tubers into egg-sized pieces as long as each piece contains 2-3 eyes
			* Lots of different methods of growing potatoes, but all involve adding more soil (or soil/organic matter combo) over time as the plant grows. Don’t allow sunlight on the tubers, or they will turn green, signaling the presence of solanine, a toxin.
		- Legumes (peas, beans, favas) Growing Tip: Apply legume-specific inoculant (rhizobial bacteria) at planting time to facilitate nitrogen-fixing process.
* Warm Season Crops: vegetables that grow best during the summer months. These crops include summer and winter squash, tomatoes, peppers, eggplants, beans, corn, okra, melons, cucumbers.
	+ Soil temperatures must be warm enough for the seeds to germinate.

Note: Stores and catalogs will continue to sell seeds for tomatoes, eggplants and peppers well into spring and summer, well past the time when they need to be planted (indoors). Stores will also start selling tomato seedlings/plants long before it’s safe to buy and plant them.

Don’t be tempted! Know what the correct planting dates are for each crop.

Seeds or transplants for warm-season crops?

* If starting solanaceous crops (e.g., \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) from seed, must do indoors starting around now through mid-March. Otherwise, obtain starts/seedlings from a nursery or plant sale, and plant out after all danger of frost is over (after Mother’s Day – but watch the weather).
* For cucurbits (e.g., \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_), you may have more success direct-sowing the seeds out into the garden. If purchasing starts, don’t let them know they’re being transplanted, or they’ll go into temporary shock.

How to Choose Healthy Transplants

* Plant and pot size should be proportional
* Healthy roots predict a healthy plant. Check!
* Leaves should be nice, even green color (not yellow or purple). Lower leaves may have a bit of damage but shouldn’t show evidence of disease (e.g., spots).
* Check under leaves for mites, aphids.
* Tall, leggy plants have been light-stressed. Leggy tomatoes can simply be planted more deeply and will develop roots along the stem.
* Bushy plants already bearing flowers and fruit (in the stores in May) have been forced in greenhouses to tempt you to buy them. They may NOT be the best choice. Yield may be reduced, as they’ve been putting their energy into premature fruit production rather than into root growth.

Harden Off Warm-Season Crop Seedlings/Transplants

* Hardening off is a week-long (or so) process of getting the plants used to living outdoors.

Other Information on Seed Packets & Choosing Varieties

* Days to Maturity
* Plant Habit
* Pest and Disease Resistance
* Flavor

**Days to Maturity (DTM):**

The number of days, on average, between germination and harvest, or between planting (a seedling) and harvest. The DTM are a pretty good guideline but may vary according to weather, water, fertilizing practices and other factors.

* For cool-season crops, consider your needs and when you’re planting (spring planting for a late spring/early summer crop, vs. late summer planting for a fall crop)
	+ Know the difference between cold-tolerant and heat-tolerant or bolt-resistant varieties. What does the seed packet or catalog description say?
		- TIP: Look at the variety names for hints. “Arctic King,” “Red of Winter,” and “Ice Queen” lettuces do very well in the cold and are great choices for late summer plantings/fall & winter harvest, whereas “Bloomsdale Longstanding Spinach” or “Summer Lettuce Mix” will stand longer in the heat (i.e., resist bolting) better than Giant of Winter Spinach. Always verify by reading the full catalog description.
		- Johnny’s Seeds and other catalogs often highlight which varieties are cold-tolerant and which are heat-resistant/tolerant. Johnny’s uses easy-to-follow icons; other catalogs usually say within the written description.
	+ Days to maturity of cool-season crops matter a little more for July/August-planted crops because of the “closing door” of approaching fall frost; add 10-14 days to days to maturity for fall crops. It’s fine to choose a 75-day sugar snap pea when you’re planting in March, but if you’re planting peas in late July or early August for a fall crop, you would do better with a 55-day pea (remember to add 10-14 days, making the 55-day pea really a 65-69-day pea). August 1 plus 69 days brings you to October 8th. The 75-day pea (which would really be 89 days if planted August 1st) would make your harvest begin about October 28th. You’re unlikely to get any of those peas for all that effort ☹ But, just by choosing a shorter-maturing variety, you CAN have fall peas!
* For warm-season crops, days to maturity also matter.
	+ For some crops that can take a long time to mature, such as winter squash, you may prefer to include at least one type that matures at about 85 days rather than choosing only ones that take 110 days. If you plant them June 1st (or even mid-May), and we get an early frost in September, your plants may die before you can harvest them. Generally speaking, 110 day squashes still are a good bet in our area.
	+ For crops like potatoes and tomatoes, you may wish to choose some early producers, some mid-season producers, and some late-season producers to help ensure that you have crops to harvest starting in mid-July and all the way through the first killing frost. Variety names often give away this type of information, like “Glacier,” “Early Annie,” and “Fourth of July hybrid” tomato. If you only plant 90-95 day tomatoes, you’ll be waiting until September for tomatoes while your neighbors have been eating tomatoes for 2 months already.
	+ Hamson DX 52-12 Tomato is a tomato bred at Utah State to resist blossom drop during the hot Utah summer days/nights (blossom drop prevents fruit from being able to form).

**Relevant Information to look for on the seed packet or in the catalog description**

* DTM
* Pest and Disease Resistance/Tolerance or Susceptibility
	+ What does the seed packet or catalog description say? It helps in advance to know which pests and diseases certain crops are vulnerable to. For example, powdery mildew affects many squashes, cucumbers, and melons. Some varieties (especially hybrids) have been bred to be resistant. If you have problems in your garden with a particular pest or disease, you might consider choosing varieties that show resistance. Even some heirlooms show resistance to certain pests or diseases. Do your research to find out which ones will work best for you!
* Color, fun or unique shape, rare variety, other characteristics that get you excited!
* Flavor:
	+ TIP! If the description does not specifically describe flavor in a positive way, the flavor probably isn’t its best feature. Remember, the seed company is trying to SELL you this variety, and if they can’t think of something amazing to say about its flavor, it’s probably because its flavor isn’t that amazing. This might not be such a big deal if what you’re really after is high productivity, disease-resistance or some other feature.
	+ TIP! Read on-line reviews from others who’ve grown the variety you’re considering getting. What do others have to say about it? Did it perform as advertised? How did it taste?
* Productivity (fair, good, or heavy producer)
* Easy choice (Johnny’s Seeds does a good job of highlighting which varieties are easier to grow for beginners or those with challenging situations)
* HABIT!
	+ Is the variety a compact variety, or does it require a lot of space or a sturdy trellis? Get to know how different crops grow, and then look for specific varieties that meet your needs.
		- For example:
			* Pole beans require a teepee, fence or trellis to climb up, but the “footprint” in the garden is actually smaller than planting bush beans. This vertical gardening technique can really help urban gardeners!
			* Most summer squash produce on open-habit bushes that will NOT climb trellises, but some varieties are much more compact and therefore better for small gardens or containers than are other varieties.
			* Most winter squashes are vining types, but some vines get 20’ long with huge leaves that turn a small urban backyard into a jungle that’s hard to maintain, water, harvest, etc. Other winter squash varieties produce shorter vines or work well climbing up trellises (again taking up less square feet of garden space – a vertical gardening technique).
			* Many tomatoes are indeterminates that can grow 8’ higher or more and up to 3 or 4’ in diameter. These can be hard to manage in a small urban setting. There are short indeterminates, semi-determinates, and even dwarf varieties that take up much less space and still produce nice tomatoes in pretty adequate numbers. We will have a wide variety available at our Spring Plant Sale on Saturday, May 11th at Rowland Hall (720 S. Guardsman), including 5 dwarf varieties!
				+ If space isn’t a concern, and you’re more interested in flavor, productivity, cool colors, etc., then there are literally thousands of varieties of tomatoes to choose from! We’ll have 70+ varieties at our Spring Plant Sale.

**USU-recommended varieties**

Utah State University Cooperative Extension has a free fact sheet available on-line that lists many varieties of vegetables commonly grown in Utah that do very well here. This is one of Extension’s many helpful resources. Here is the link:

 <http://extension.usu.edu/files/publications/factsheet/Horticulture_Vegetables_2014-02.pdf>

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**Next week: Intensive Gardening Practices; Ongoing Garden Care and Maintenance**