Our daylight has peaked and the days are now getting shorter. Have you noticed yet? No? Mid-season is so busy, and usually so hot, that we hardly notice. In fact, July’s oppressive mugginess typically has me begging for shorter days just for relief. Not this year, though. I wouldn’t mind if it were to get just a little hotter before everything is over and done with. Not that I love sweating bullets, it’s just that most Midwestern crops do better with some serious, steady, hot and steamy weather. In this newsletter, the issue of heat is addressed and its importance to our crops. Stay cool everyone!

Julianne Hurley

When is it too late to begin a garden?

It’s July - two months past what is typically considered the planting season - and someone wants to know, “Is it too late to plant a vegetable garden?” The short answer to that is “No”. July is still a fine time to plant many veggies for your dinner plate. Just know that you may need to adjust your expectations. You can choose to get a smaller crop from a longer season plant, you can plant short season crops that do well in the cooler fall temps, or you can plant specific varieties that are smaller and mature earlier. Worth noting is the option of purchasing or building a low tunnel or row cover – covers for crops to add warmth in order to extend the growing season. Bear in mind, though, that the further we go into the season, garden centers may no longer carry starter plants, and also the days become shorter. It is important to understand how many Growing Degree Days (heat units) plants need, and whether or not your plant is likely to receive enough of them to produce a crop. It is so disappointing to a backyard farmer to spend the time watching a plant grow to become a vigorous, healthy plant only to not have enough time to bear any fruit because it was nipped by the frost or the bees vacated the premises due to the cold.

What is a Growing Degree Day or heat unit? See the article following this one for an explanation.

Let’s look at some possibilities for your late-season garden:

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Days</th>
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<tbody>
<tr>
<td>Super Sweet 100 Cherry tomatoes</td>
<td>70 days</td>
</tr>
<tr>
<td>Early Harvest or Early Girl tomato</td>
<td>67 days</td>
</tr>
<tr>
<td>Cherry Belle radish</td>
<td>22 days</td>
</tr>
<tr>
<td>Little Finger carrot</td>
<td>65 days</td>
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<tr>
<td>Detroit Dark Red beet</td>
<td>60 days</td>
</tr>
<tr>
<td>Snowball cauliflower</td>
<td>70 days</td>
</tr>
<tr>
<td>Green Magic broccoli</td>
<td>57 days</td>
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<tr>
<td>Early Golden Acre cabbage</td>
<td>65 days</td>
</tr>
<tr>
<td>Burpless Bush cucumber</td>
<td>55 days</td>
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<tr>
<td>Fordhook zucchini</td>
<td>57 days</td>
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<table>
<thead>
<tr>
<th>July 2015</th>
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<td><strong>Su</strong></td>
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<td>5</td>
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<tr>
<td>12</td>
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<tr>
<td>19</td>
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<tr>
<td>26</td>
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</tbody>
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Around Here

**Friday, July 3**
Extension office closed for Independence Day

**Friday, July 3, 3:30 – 6:00 pm**
Farmers’ Market on the square

**Thursday, July 9, 6:30 – 8:30 pm**
Master Gardeners’ monthly meeting & work night – fairgrounds

**Friday, July 10, 3:30 – 6:00 pm**
Farmers’ Market on the square and Kids’ Day event

**Saturday, July 11, 10:00–12:00 am**
The Garden Beet 4-H club – field trip

**Friday, July 17, 3:30 – 6:00 pm**
Farmers’ Market on the square

**Thursday, July 23 – 27**
County Fair!!

**Friday, July 24, 3:30 – 6:00 pm**
Farmers’ Market on the square

**Friday, July 31, 3:30 – 6:00 pm**
Farmers’ Market on the square

**Saturday, August 1, 7:30 am–5:15 pm**
Bus trip to Des Moines Downtown Farmers’ Market and also Neal Smith Prairie.
Yellow summer squash 45 – 55 days
Dwarf Blue Curled kale 55 days
Lettuces 50 – 60 days
Most bush green beans 50 – 60 days
Sugar snap peas 70 days
Green bunching onions 60 days (if you can locate sets)
Yellow or red potatoes 70 days (if you can locate seeds)

The days to maturity shown is under ideal conditions. Some plants will take longer due to declining sunlight and temps. Also, lettuces and greens, beets, broccoli, cabbage, cauliflower, radishes, and peas need cooler temperatures for germination. Start those plants indoors, or in an area where it can get partial shade, or during a week where there will be a stretch of cooler weather. Potatoes produce best when temperatures are 60° – 70°. However, you can top off the ground with lots of white mulch, such as straw, to keep soil temperatures cooler.

Enjoy your late-season garden; it will still bring many returns for your effort!

What is a Growing Degree Day or heat unit?

We often hear the term “...days to maturity” or read it on the back of a seed packet. To the novice grower, this is gospel, an absolute. To the slightly more experience gardener, this is merely an average. The days to maturity are calculated assuming ideal conditions and the plant’s response to those conditions. The number of days can vary from year to year for the exact same plant due, in large part, to the weather. Each plant needs a certain quantity of heat to speed up its growth rate. Any more is unused or any less will slow the plant down. This unit of heat is referred to as Growing Degree Days (GDD) or Heat Unit (HU).

A GDD is measured in a 24-hour period by adding the high temperature for the day with the low temperature of the day, dividing by two and subtracting a base temperature. For many plants the base temperature is 50° because that is the lowest temperature where the plant will do any amount of growing. For other plants, though, the base temperature can be different. There is also a high temperature for maximum growth of the plant. Temperatures that reach higher are not counted above the maximum temperature. The equation looks like this:

High temp. + low temp. ÷ 2 – base = GDD

To give you an example of this explanation, I will use an average mid-season tomato. It needs approx. 1800 GDD from the time the seed is planted until it begins to produce tomatoes, with a maximum growth temp of 86° and base temperature of 50°.

Let’s just say a week went like this:

Sunday’s high temp was 72 ° and low was 51°  72 + 51 ÷ 2 - 50 = 11.5 GDD
Monday’s high temp was 70° and low was 51°  70 + 51 ÷ 2 - 50 = 10.5 GDD
Tuesday’s high temp was 79° and low was 54°  79 + 54 ÷ 2 - 50 = 16.5 GDD
Wednesday’s high temp was 82° and low was 60°  82 + 60 ÷ 2 - 50 = 21 GDD
Thursday’s high temp was 85° and low was 63°  85 + 63 ÷ 2 - 50 = 24 GDD
Friday’s high temp was 90° and low was 72°  86 + 71 ÷ 2 - 50 = 28.5 GDD
Saturday’s high temp was 90° and low was 73°  86 + 73 ÷ 2 - 50 = 29.5 GDD

Weekly Total GDD = 141.5 GDD

Can too much heat hurt a crop? Too much of anything good becomes a bad thing. When temperatures soar for too long, dehydration becomes an issue. Another negative side effect is blossom drop and also low pollination rates. Apparently, things can get too hot for bees as well.
IT’S FAIR TIME!!

The Monroe County 4-H and FFA Community fair is July 23 – 27. Don’t miss it!

The Master Gardeners’ & Friends July meeting will be held at the Monroe County fairgrounds, providing we have dry weather. There are still tasks to be done in the flower beds so they look good for the county fair this month. The time goes so much faster when there is good conversation, so come out and bring a friend with you! If it is raining, we will hold a shortened meeting in the Extension office. Please feel free to do some work on your own in the flower beds during a dry day. Meeting time is Thursday, July 9 from 6:30 – 8:30 p.m.

Mark your calendars!

We are hosting another bus trip. This time we will spend a couple of hours or so at the Des Moines downtown Farmers’ Market, where visitors can peruse vendor booths filled with all kinds of fresh produce, flowers, homemade goodies, and other specialties. Coolers with ice will be brought along on the bus for storage of purchased items. Lunch will be on your own at the market. Next, we will head to the Neal Smith Prairie located in Prairie City to view their spectacular fields. From what we are told, the prairie is in full bloom around the end of July and first part of August. The air is also filled with a variety of birds, and the auto tour of the bison is not to be missed! This is a family-friendly event, so invite the kids and grandkids. Open to everyone. Registration deadline July 27.

Visit the Monroe County Extension & Outreach website at www.extension.iastate.edu/monroe for more details in the coming weeks about this trip. Date: Saturday, August 1, from 7:30 a.m. – 5:30 p.m.

July Tasks:

- Prune staked tomatoes
- Begin spring/fall crops from seed again
- Hand-pollinate squash if no presence of bees
- Begin harvesting early tomatoes, cucumbers, sweet corn, and new potatoes, summer squash, and carrots
- Replenish mulch as needed
- Prune drought-tolerant shrubs as needed. Examples would be Ninebarks, Bridal Wreath, Korean Lilac, and Arctic Willows
- Dead head flowers or cut back vigorous growers, such as Petunias, Coreopsis, Geraniums, Catmint, Blanket flower, and Salvia
The Garden Beet 4-H club is on the move again this month. On Saturday, August 11, at 10:00 a.m., we will meet at the Extension office to load into the car and travel to a location TBD for a nature hike. We will make a fun time of it with a scavenger hunt or some other type of look-and-find game. Please dress accordingly.

Our second meeting will be Tuesday, August 21 at 5:30 p.m. We will congregate at the Extension office then drive to Country Roads Produce in Moravia for a tour of their fruit and vegetable fields. After that, we will return to the office for some refreshments.

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Extension programs are available to all regardless of race, color, national origin, religion, sex, age or disability.

WWW.EXTENSION.IASATE.EDU/MONROE