

Plant Wise

IOWA STATE UNIVERSITY
Extension and Outreach

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How Hot Does Your Pepper Grow!

Let's talk about the heat of the peppers in your garden. Most of us know the difference from a bell pepper to a jalapeno. Believe it or not, some people think the hot dry weather makes peppers hot, cool weather and lots of water make them mild. Same with onions. We need to educate.....



Basics

Peppers are native to tropical America and are particularly important in the cuisines of tropical Asia and equatorial America. Traces of pepper fruits have been found in prehistoric remains in Peru and Mexico, and the plants were widely grown in Central and South America by various pre-Columbian civilizations.

Pepper, (genus *Capsicum*), genus of more than 30 species of flowering plants in the nightshade family (Solanaceae), several of which are extensively cultivated for their edible, often pungent fruits. The genus comprises all the varied forms of fleshy-fruited peppers, including the mild bell peppers that are used as a vegetable and the hot peppers, such as habanero and tabasco that are used as relishes, pickled, or ground into a fine

powder for use as a spice. Some peppers are grown as ornamentals.

What Is The Scoville Heat Unit Scale?

The Scoville scale is a tool for measuring the spiciness or pungency of hot peppers. The scale measures the amount of capsaicin (the chemical compound that causes spicy heat) in a pepper and assigns it a number rating in Scoville Heat Units (SHUs). The Scoville heat unit scale rates how spicy peppers, as well as common products made from peppers, like chili powder, are. The rating was devised by an American pharmacist Wilbur Scoville in 1912 and has become the standard rating system used today.



The ranges of Scoville Heat Units (SHU) typically used to call a pepper mild, medium, hot, or extra hot are:

Mild (100 to 2,500)

Medium (2,500 to 30,000)

Hot (30,000 to 100,000)

Extra Hot (100,000 to 300,000)

Extremely Hot (above 300,000)

Knowing how hot a Jalapeno pepper is, you can gage what these other peppers on the following list must be like. You will notice that peppers listed after the Habanero are all far about the Extremely Hot rating of 300,000 units.

Pepper Rating from Mild to Hot

Bell Peppers (SHU 0)

Shishito (SHU 50 to 100)

Banana Peppers (SHU 0 to 500)

- Sweet Italian Pepper** (SHU 100 to 500)
- Piquillo** (SHU 500 to 1000)
- Cuban Pepper** (SHU 1,000)
- Poblano** (SHU 1,000 to 2,000)
- Anaheim Peppers** (SHU 500 to 2,500)
- Cherry Peppers** (SHU 2,500 to 5,000)
- Pasilla Peppers** (SHU 1,000 to 2,500)
- Jalapeno** (SHU 1,000 to 8,000)
- Fresno Peppers** (SHU 2,500 to 10,000)
- Yellow Chill Peppers** (SHU 100 to 15,000)
- Serrano Peppers** (SHU 10,000 to 25,000)
- Guajillo Chili Peppers** (SHU 2,500 to 30,000)
- Cayenne Peppers** (SHU 35,000 to 50,000)
- Rocoto Peppers** (SHU 30,000 to 100,000)
- Bird's Eye Peppers** (SHU 50,000 to 100,000)
- Piri Piri** (SHU 50,000 to 175,000)
- Datil Peppers** (SHU 100,000 to 300,000)
- Habanero** (SHU 100,000 to 350,000)
- Scotch Bonnet** (SHU 100,000 to 400,000)
- Ghost Pepper** (SHU 1,000,000)
- 7 Pot Douglah Pepper** (SHU 1,000,000 to 1,500,000)
- Komodo Dragon Peppers** (SHU 1,400,000)
- Trinidad Moruga Scorpion Pepper** (SHU 1,600,000)
- Carolina Reaper** (SHU 1,000,000 to 2,200,000)
- Dragon's Breath** (SHU 2,480,000)
- Pepper X** (SHU 3,018,000)



Chili Peppers | Mild to Medium Heat

The true flavor and heat of chilies to make your food hot, and not just in terms of temperature.



Low to no-heat varieties like bells are generally called sweet peppers, while piquant varieties, (pleasantly sharp taste or appetizing flavor), are commonly referred to as chiles.

When picking fresh peppers, look for deep, rich colors and glossy skins, and avoid wrinkles and bruising. As they ripen, many peppers change color from green to other bright colors, and some get spicier.

When working with hot chiles, avoid contact with your eyes and always wash your hands thoroughly with dish soap. The use of gloves is highly recommended when cutting, chopping and preparing hot peppers for cooking

So know what you are buying or planting in your garden. Whether from the store or Farmers Market, research your peppers first before using. Enjoy your peppers safely!



Iowa State Fair

The Great Iowa State Fair begins August 10th and runs through August 20th. If you have never been to the Iowa State Fair, you should know it is considered the best state fair in the country!



It is amazing! It is one of the oldest and largest agricultural and industrial expositions in the country. The first Iowa State Fair was held in 1854, and moved to its present location in 1886. The Iowa State Fairgrounds has many iconic buildings.



Live Stock Pavilion

Over the years, donations for renovations have kept them a big part of this long fair tradition. The large Pavilion has hosted thousands of livestock shows! The Horse barn, sheep barn, swine barn and cattle barns are full of the different breeds for

you to walk down the aisles and see. In recent years the air-conditioned Jacobson Exhibition Center was added to the end of the Horse barn. Most of the horse shows are now held there. The air-conditioned Varied Industry building has a little of everything! Hot tubs to pianos. Home improvement information, colleges, PBS, Taste of Iowa and so much more!

Up on the hill, is the air-conditioned Patty and Jim Cownie Cultural Center. This 3 story building has elevators to make getting around easier. It houses the Photography, Hobbies and Crafts, and features Iowa Artists. Many are on hand demonstrating and selling their works of Art. The building is full of interesting and beautiful photos and art!



Agriculture Building (inside)

But the pride of the fair is the John Deere Agricultural Building. This 2 story building houses the fruits, vegetables and flowers of exhibitors from all parts of Iowa! Crops and grains in their tidy sheaths. The history of FFA, Iowa agricultural based vendors and displays are up stairs along with Iowa Honey producers and a Honey Bee Hive.



But what everyone wants to see is the famous "Butter Cow" sculpture! There is always a line moving slowly along that side of the building. While going through the line, you will see ice sculptures and other products of Iowa farms in the coolers. Then you come to the "Butter Cow"! If you are there at the right time, you will see the sculptor artist

working on other butter sculptures for the duration of the Fair. It will be a surprise to see what she has decided to sculpture for 2023! You must stop by and see this amazing building and piece of History. So much to see, all kinds of free entertainment during the day, Grandstand entertainment in the evenings, so many food vendors. If it can be put on a stick, it will be at the Fair! There is literally a thousand things you can see and do at the Fair!



Peaches

The cold winters in the northern Great Plains make growing peaches a gamble. Iowa is too cold for most sweet peaches. While some varieties can survive Iowa's cold weather, most will die if the winter temperatures drop consistently below 10 degrees Fahrenheit. Growers only get a marketable crop one in four years even in southern Iowa. Cold winter temperatures may destroy the flower buds on peach trees. If we have a mild winter, or your tree is in a micro-climate, you may be one of the luck ones.

Peach trees are especially short-lived in Iowa, even under the best growing conditions. An average of 10 or less years. Many can only get the tree to live 4 to 5 years tops. The sweeter the peach variety, the warmer weather it needs to survive in Iowa. So the hotter, the better. Unlike apple, cherry, pear, and plum trees that tolerate heat, peach trees will actually do better the hotter it gets. That means the hot and humid summers are perfect for peach trees to bear more fruit.

Peach Trees are the quickest growing fruit tree and will actually bear fruit within 1 to 2 years after planting.

Peaches are prone to diseases such as blight, mold, etc. Not only during early spring during wet conditions, but can also continue throughout summer and even fall. So good air flow in the location of planting your tree is important. This can also be done with proper pruning techniques. You should plant Peach trees next to other trees in the same family like nectarines and apricots. Keep them in a well-draining and full-sun area of your yard. Here are three varieties that do well in southern Iowa.



Redhaven Peach trees produce luscious, top-quality fruit. This popular variety is known for being a top producer of medium-sized peaches. Fragrant, pink flowers blossom in the spring. When the fruit ripens in July, you'll enjoy these sweet peaches with almost fuzz-less skin over firm, creamy textured yellow flesh. These freestone peaches are great as a fresh snack or for canning and freezing. Redhaven is heavy-bearing and easy to grow and maintain. The branches have a spreading nature, and this variety is disease-resistant to leaf spot. It is a self-pollinating fruit tree, making it great for smaller gardens and backyard orchards. Since this tree is so vigorous, regular pruning and thinning is recommended.

Reliance Peach Trees. This peach tree originates from South Haven, Michigan in 1930, and was introduced in 1940. It is one of the hardiest peaches. This tree produces a heavy crop of fruit as far north as Canada, even after frigid winters. Perfect for northern fruit gardens! Fruit is medium-to-large with a sweet, peachy flavor. Features pink flowers in spring. Originates from New Hampshire in 1964. Cold-hardy. Freestone. Ripens in July and is Self-pollinating.



Polly White Peach Trees, are one of the most winter hardy heirloom peach varieties; withstands temperatures to -20 degrees Fahrenheit. Polly White peach trees have medium to large fruit with white skin overlaid with a rich crimson blush. They are very sweet, tender, juicy, white freestone flesh of the highest quality. Recognized as a hardy and productive since it was first recognized in Iowa early 1920's.



Plum Upside-Down Cake

YIELD: Serves 8-10 PREP TIME: 40 mins
OVEN: 350° 55 mins TOTAL TIME: 2hr 15 mins

INGREDIENTS:

Plum Filling

- 3/4 cup sugar
- 1/3 cup water
- 2 tablespoons unsalted butter, softened
- 1 1/2 pounds medium plums (about 6), pitted and cut into 1/2-inch-thick wedges
- 2 lb. red new baby potatoes, halved or quartered

Cake:

- 1/2 cup crème de fraîche
- 2 tablespoons whole milk
- 2 teaspoons pure vanilla extract
- 1 1/2 cups all-purpose flour
- 2/3 cup sugar
- 1 teaspoon baking powder
- 1/2 teaspoon baking soda
- 1/2 teaspoon salt
- 1 1/2 sticks unsalted butter, softened
- 2 large eggs, beaten
- Whipped cream, for serving

DIRECTIONS:

In a small bowl, whisk the crème de fraîche with the milk and vanilla. In a large bowl, using a hand mixer, mix the flour with the sugar, baking powder, baking soda and salt. At low speed, beat in the butter until the mixture resembles moist crumbs, about 30 seconds. Beat in the eggs at low speed until incorporated, then beat the batter at medium-high speed until light and fluffy, about 1 minute; scrape down the side of the bowl. At medium speed, beat in the crème fraîche mixture until smooth, about 30 seconds. Scrape the batter over the plums and gently spread in an even layer. Bake the cake in the center of the oven for 55 to 60 minutes, until golden and springy. Let cool in the pan on a rack for 30 minutes, then invert the cake onto a serving plate. Cut into wedges and serve warm or at room temperature with whipped cream.



Do You Remember When?

August was vacation time. Everything was timed so we could take off for several weeks to go on that family trip. We just finished putting up hay so we had 3 maybe 4 weeks before the next cutting, Mom had been busy canning beans and tomatoes. The garden had slowed down, so Mom was good to go! Of course the livestock had to be taken care of so Dad always worked with our neighbors. They would feed and watch our livestock and in turn Dad would watch and feed theirs when they would go somewhere. Dad and my Brother would grind feed and have every hog feeder full, and have an extra feed wagon full and backed into the barn behind the one we were feeding our fat cattle out of. While we still had the milk cows, like almost everyone in our neighborhood, we did the same. They milked ours and we milked theirs. Neighbors took care of each other! Often stopping in for coffee and homemade goodies Mom had just baked. Checking in on each other to see if they needed some help. Borrowing or lending equipment to get the farming done. Summer was full of neighborhood picnics, homemade ice cream, fresh baked desserts and lots of laughter. My memories are full of fun carefree days growing up on our farm. Vacations as a family, in a '64 Ford Galaxie 500, with no air-conditioning and no seat belts in the back seat. Windows rolled all the way down, air blowing in your face, going 70 mph down the old narrow highways, headed to our great western states on our summer vacation! No headphones, no back seat videos, just us kids in the back playing "I spy" looking for different state license plates, trying to get truck drivers to honk their air horns and just simply talking. I wouldn't change one single thing about the way I grew up! What great memories I have!!

Enjoy Your Summer Vacation! ☺



Mills County to hold Master Gardener Classes this Fall, 2023

If you are a person who loves to garden, loves to learn and loves to contribute back to your community, then being a Master Gardener is for you! Taking the classes deepens your horticultural knowledge and opens new friendships with fellow gardeners!

To get started, here is what you need to do. Check with your local county ISU Extension office to see if they are doing Fall Master Gardener classes. (Here in Mills County we are!) On-line registration for the fall session is **July 17 - August 18, 2023**.

After your application is accepted, you will be asked pay the fee of \$150 for the Master Gardener Volunteer, trainee on-line and in-person sessions, and background check.

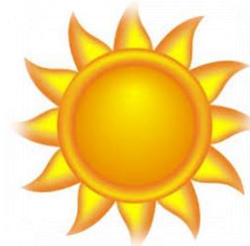
The Master Gardener Prohort trainee fee is \$550. This session is for professional services and requires no volunteer county service.

The classes will be from September 5th through November 10th, 2023.

If you are interested, call or email your local ISU Extension and Outreach County office and get your name on the list. You will then be contacted when the registration period opens. Here is the Mills County Extension and Outreach contact information: xmills@iastate.edu or (712)624-8616



August UP COMMING EVENTS



- **July 18 – August 18, Registration for Master Gardener classes. ([Apply Here!](#))**
- **August 4, 2023 – 11:am – 1:pm - Prairie Strips Field Day** - Des Moines, IA RSVP to Tim Youngquist at 712-269-0592 or timyoung@iastate.edu.
- **August 8, 2023 – Fruit & Vegetable Field Day** 2:00-5:30 p.m. followed by supper. Please register by 3 August
- <https://www.extension.iastate.edu/vegetablelab/2023-isu-fruit-and-vegetable-field-day>
- **August, 10 – 20, 2023 – Iowa State Fair**
- **September 5, 2023 – Master Gardener Classes begin**
- **Iowa Master Gardener You Tube** – Follow the link below. You will find many ISU educational gardening webinars and videos here for educational hours. <https://www.youtube.com/channel/UCoyB28Aj3qOovjpwkSiLBg>

- **Mills County Master Gardener Facebook Page**
<https://www.facebook.com/MillsCountyMasterGardeners>
- **Iowa Master Gardeners Facebook Page**
<https://www.facebook.com/iamastertgardeners/>



August GARDENING TO DO LIST



- **Routinely check flowerbeds**, watering and pull any weeds as you go.
- **Mulching straw** tomato and other plants will help with weed control and help the soil retain moisture.
- **Water tomato plants** evenly when they begin to form tomatoes to help prevent skin splitting.
- **Check Tomato** plants for hornworm caterpillars. Use a black light at night. The worms will glow!
- **Continue to water perennials** as needed.
- **With the moist Humid conditions** watch for mold and mildew. Air circulation is key to prevention. Peonies are very susceptible.
- **Mow lawns** regularly to keep grass at 2 1/2" height
- **Look for pests** and other problems; spotting early can mean less chemical controls. Note: slugs and caterpillars can be removed manually.
- **Control slugs** near your hostas by putting out slug bait. Sprinkle the bait around the hostas. Put out small amounts, replenish as needed.
- **Be ready for Japanese Beetles.** Purchase light weight see through mesh to cover rose bushes. There are nettings that will go over small fruit trees. Netting tunnels for garden vegetables.
- **Harvest Broccoli and cauliflower** as they are ready. In hot weather broccoli can bolt. Gently steam broccoli to retain maximum nutrients.
- **Cut perennials herbs**, and hang them to dry in a warm, bright spot (no sun!) with good ventilation.
- **Fertilize Established Roses.** Use an organic 5-10-5 fertilizer.
- **Water newly planted** deciduous trees and shrubs, to help them establish their root system.
- **Weed and Water** your garden. Keeping it weeded helps your plants with no competition for nutrients and water. Mulch will also help.
- **Spray fruit trees** following guidelines for each type of trees



Resources for Horticulture information Iowa State University Publication

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| RG 310 | Caring for Roses in Iowa |
| SUL 5 | Pruning Trees: Shade, Flowering, and Conifer |
| PM 780 | Pruning and Training Fruit Trees |
| RG 501 | Pruning Raspberries |

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| PM 873 | How to Construct a Cold Frame Or Hotbed |
| ENT 61 | Gardening for Butterflies and Pollinators |
| PM 820 | Garden Soil Management |
| RG 209 | Organic Mulches |
| PM 2086 | Growing Organic Vegetables in Iowa |
| RG 201 | Integrated Pest Management |
| PM 874 | Starting Garden Transplants at Home |
| PD 607 | Suggested Vegetables Varieties for the home Garden |
| PM 819 | Planting a Home Vegetable Garden |
| PM 534 | Planting and Harvesting Times of Garden Vegetables |
| PM 870A | Small Plot Vegetable Gardening |
| PM 666 | Weed Management in the Home Garden |
| PM 814 | Where to put your Vegetable Garden |
| PM 870B | Container Vegetable Gardening |
| PM 994 | Asparagus in the Home Garden |
| PM 1893 | Cilantro |
| PM 1894 | Garlic |
| HORT 3082 | Growing and using Basil |
| HORT 3085 | Onions |
| HORT 3084 | Peppers |
| HORT 3086 | Potatoes |
| PM 719 | Rhubarb in the Home Garden |
| HORT 3089 | Sweet Corn |
| PM 1895 | Tomatillos |
| HORT 3091 | Tomatoes |
| PD 54 | Tomatoes Diseases and Disorders |
| HS 96 | Growing Tomatoes in a Container |
| HORT 3068 | Top 13 Vegetables to Donate to Food Pantries |
| PM 823 | Watering the Home Garden – Trickle Irrigation |

Horticulture Publications on-line

<https://www.extension.iastate.edu/store/ListCategories>

ISU Hotline Links and Numbers

Hotlines available for all

Iowa Concern 800-447-1985 Financial questions, legal education, stress counseling, crisis/disaster resources and referral (24 hrs - all days)

Beginning Farmer Center 877-BFC-1999 Program to match beginning and retiring farmers (8 a.m. to 5 p.m.)

Teen Line 800-443-8336 Personal and health-related information and referral (24 hrs - all days)

Iowa 2-1-1 211 Resource referral for housing, health, food, family, transportation, employment, education, and legal assistance (24 hrs - all days)

Hot lines available for Iowa Residents Only

AnswerLine Toll-free: 800-262-3804 Local: 515-296-5883 Questions relating to home and family (9 am-noon & 1-4 pm)
Iowa Healthy Families 800-369-2229 Health information and referral (24 hrs - all days)

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