Weather & Gardening

Many of the plants we buy contain tags indicating that they are **annual, perennial, temperate, or tropical,** illuminating how plants will respond to the weather conditions (temperature, rainfall, wind, light and surrounding structures). While you may not be able to control these conditions, you can fine-tune the location (shady vs. sunny) of the plant that is suggested for the specified zone considering the light, heat and the plant hardiness zone information of your area. This brochure should help the gardener understand how local weather and climate can be utilized for successful gardening.

How do I utilize the Weather and Climate information for successful gardening?

NOAA's National Weather Service
Climate Services Program

Kansas City Weather Forecast Office
1803 N 7 Hwy
Pleasant Hill, MO 64080

Phone: (816) 540 - 6021
Web: http://weather.gov
E-mail: lisa.schmit@noaa.gov

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KANSAS CITY

NOAA's
National Weather Service

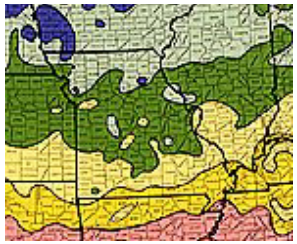
Climate Services Program

Tel: (816) 540 - 6021
http://weather.gov/KansasCity

How does weather affect my garden?

Weather is the ultimate factor for plants to thrive or perish. Temperature, moisture and their extremes have a direct effect on the survival of plants. Climate is the main reason plants favor certain places to grow. Climate is the behavior of the weather which can be described by both average values and extremes over a period of time. Knowing the local climate is a key factor to successful gardening.

What are the key elements of the weather for gardening?



USDA Plant Hardiness Zones

Freeze: Freezing temperatures can kill a plant instantly. The United States Department of Agriculture (USDA) uses Plant Hardiness Zones which factors in average winter minimum temperatures. The Plant Hardiness Zone for the Kansas City metro area is Zone 5, where minimum winter temperatures can fall to minus 10 to minus 20 °F. Selecting plants for your garden should start with making sure they will survive the winter by utilizing the USDA Hardiness Zone Map. Annuals, plants that live only for one year or one season, such as petunias or vincas, are capable of living years in a frost-free environment. Knowing the first and last freeze days for your location can help in successful gardening. The following table shows the last day of spring freeze and the first day of fall freeze with associated risks (chance of freeze between these dates) in Kansas City. For further information on the USDA plant Hardiness zones:

http://www.usna.usda.gov/Hardzone/hzm-sm1.html

Last Day of Freeze	Risk	First Day of Freeze
April 21	10%	October 14
April 7	50%	October 28
March 24	90%	November 11

Heat: Extreme heat stresses plants and can even result in their demise. The American Horticultural Society (AHS) uses heat codes based on the average number of days per year with temperatures greater than 85°F. The AHS heat code for the Kansas City metro area is 75 and for North Kansas City it is 63. These numbers place Kansas City in Plant Heat Zone 7 according to the AHS Heat zone classification. Most plants have the Heat Zone coding information on the tag. Make sure to select plants that will be suitable for your zone.

Wind: Transpiration from the plants and evaporation from the soil causes significant moisture loss. Since wind enhances the evaporation and transpiration, on a hot day the wind will have a negative effect, rapidly dehydrating the plant.

Knowing the average wind speed and direction in your local area can help you plan for better gardening. You can reduce the air circulation by building fences and planting hedges. **The annual average wind for Kansas City is 11 mph from the south.** However, you can make a more informed decision by consulting the National Weather Service web site for current wind conditions as well as the forecast for areas around Kansas City:

http://weather.gov/KansasCity

Moisture: Plant tissues must contain enough water to keep their cells active. Some plants may be advertised as drought-tolerant, but no plant can survive becoming completely dry. Too much water can cut off the oxygen supply to the root. Knowing the local seasonal rainfall averages can help determine which plants may need additional water or special planting requirements to avoid too much water. Kansas City receives a total of 38 inches of precipitation annually. The table on the right is a monthly break-down of the 38 inches.

J	F	M	A	M	J	J	A	S	O	N	D
1.15	1.31	2.44	3.38	5.39	4.44	4.42	3.54	4.64	3.33	2.30	1.64

Where can I get local soil temperature, soil moisture and evaporation information ?

The University of Missouri maintains an agricultural electronic bulletin board, that contains useful weather and soil measurements, that most gardeners will find helpful:

http://agebb.missouri.edu/weather/stations/index.htm