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Missouri 2010 Autumn Weather Summary

Preliminary numbers are indicating the autumn of 2010 will go down as warmer than normal for all of Missouri with varying amounts of monthly precipitation, ranging from much above to much below normal. Some notable characteristics of this fall were large month to month disparities in precipitation and numerous cloud free days during October.

September, October and November were all warmer than normal averaging 1.0, 1.7 and 2.6°F above normal, respectively. Overall, the average autumn temperature was 57.8°F degrees, or 1.8 degrees above normal. Three consecutive months of above normal temperatures resulted in this fall being the 25th warmest in the past 116 years and the warmest since 2007. Individually, September, October and November ranked as the 33rd, 31st, and 21st warmest on record, respectively.

Autumn rainfall was variable across the state from month to month, but overall, statewide average precipitation for September was 7.50 inches, or 3.53 inches above normal. It was the 10th wettest September on record for the Show Me State and the wettest September since 2008. Conditions turned dry in October and total monthly precipitation averaged 0.71 inches, or 2.65 inches below normal. It was the 4th driest October on record and the driest October since 1964. Dry conditions persisted into November, especially during the first half of the month. November average precipitation was 2.83 inches, or 0.93 inches below normal. The combined autumn average precipitation was 11.04 inches, which is 0.05 inches below the statewide seasonal norm.

All areas of the state experienced above normal rainfall in September with the exception of the Bootheel. Excluding the northwestern tip, the western 1/3 of Missouri reported highest monthly totals between 8-12 inches, whereas the Bootheel averaged less than 3 inches. A few counties in southwestern Missouri reported more than 14 inches of rain for the month. Alternatively, two Bootheel locations, Kennett and Caruthersville, reported less than 1-inch for the entire month.

In October, heaviest monthly totals were confined to some northwestern counties where Maryville and Grant City reported 2.62 and 2.31 inches, respectively. On the other hand, many locations in south central Missouri and the eastern Ozarks received less than 0.30 inches for the entire month. Lowest October rainfall totals were reported in the south central communities of Marshfield and Hartville, where each location reported a scant 0.03" for the month.

November precipitation averaged below normal across much of northern and central sections, as well as portions of far southern Missouri. A few locations across northern Missouri reported less than 1-inch for the month. A corridor of above normal rainfall was located along I-44, from Springfield to St. Louis, and southward from St. Louis to parts of southeastern Missouri. Following an exceptionally dry October, a weather observer near Marshfield, in Webster County, reported 7.16 inches for the month.

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*Happy Holidays and a
Happy New Year!*

Ambassador Poinsett's Discovery

In the early 1800's, (then) United States Ambassador to Mexico and noted botanist Joel R. Poinsett received word of a red-flowered plant being used in the nativity processional by Franciscan priests near Taxco, Mexico. Upon visiting Taxco, he found the plant growing on the hillsides of the area. Enamored by its beauty, Poinsett sent some of the plants to his own greenhouses in South Carolina, and others to botanical gardens and horticulturists around the United States. In homage to Ambassador Poinsett's for his efforts, the plant (whose scientific name is *Euphorbia pulcherrima* (Willd.)) bears the common name of poinsettia.

December is upon us and millions upon millions of poinsettias are being purchased by Americans to add to the festivity of the holiday season. Indeed, poinsettia is now America's number one potted flowering plant in terms of sales volume. What makes this statistic remarkable is the fact that all of these plants are sold in about a six week "window of time" between (essentially) Thanksgiving and Christmas. Equally remarkable, perhaps, is that poinsettia is a relative newcomer to the flowering plant trade but has quickly established itself as a holiday tradition. To illustrate just how engrained this flower has become in American culture there is an annual Poinsettia Bowl college football game, to be played this year on Thursday, December 23rd in San Diego, California.

After its introduction to the United States, poinsettia was first important as a fresh cut flower and was a specialty of Albert Ecke, a German emigrant, who grew cut flowers in southern California around the turn of this century. Upon his death, Albert Ecke's son, Paul, took over the family business and began the transformation of this species from an outdoor cut flower to that of a greenhouse potted flowering plant. The modern era of poinsettia production began in 1923 with the introduction of a cultivar named 'Oakleaf'. Many modern cultivars still trace their lineage back to this cultivar and their development to the Ecke family who still maintain a very active breeding program.

Poinsettia today is available in a myriad of colors ranging from deeper and truer reds to pastel or "designer" colors aimed at complimenting the modern color schemes of homes. Add to that the wide array of bi-colored, "speckled" and novelty colors and bract shapes and there truly is a poinsettia for everyone, regardless of their tastes. Additionally modern poinsettias have been developed to have a free-branching growth habit, early flowering, longevity in the home and bright yellow cyathia that do not abort under poor light conditions. Cyathia are the true flowers of the poinsettia; the colorful appendages subtending these flowers are actually bracts, not petals. Like any flower, cyathia mature and abscise with age. This gives the plant the appearance of being old and "past prime".

Poinsettias are short-day plants that bloom only when receiving a critical length of uninterrupted darkness of about 13 hours each day. In the Midwest, this critical day

length is achieved about the 25th of September, which triggers the flowering response. Today's popular cultivars flower more quickly after sensing short days than did the cultivars of past decades and naturally are in full bloom by Thanksgiving. Therefore, to produce plants at the height of their attractiveness for late sales, conscientious growers delay the bloom of poinsettia by applying night-break lighting. This "fools" the plant into thinking it still is summer and delays the initiation of flowering until the night-break lighting is discontinued, usually early in October.

When selecting a poinsettia for purchase, there are a number of factors to consider. One should select a plant with crisp, healthy foliage and bright bracts. Its cyathia should be tightly clustered and, preferably, just starting to shed pollen. Also, one should avoid plants with insect or disease symptoms. For example, wilted or yellowing leaves often foretell of root diseases. Post-purchase care of poinsettia is extremely important for extended life in the home. A poinsettia should be placed in a brightly lighted location away from cold drafts. Temperatures of 60o F at night and 72o during the day along with high humidity will prolong bract color. Poinsettias suffer when over-watered. One should water only when the surface of the growing medium is dry to the touch. Since poinsettias do not like "wet feet", be mindful to discard water that might collect in a saucer place under the pot. If the pot containing the plant is foil-covered, be certain there is a drainage hole in the foil.

Saving a poinsettia and re-blooming it the following year is no easy task. If you are up to the challenge, then take good care of your plant throughout the course of the spring and summer, watering it and feeding it well. Next, the plant should be cut back severely (six to eight inches) around Labor Day; this will make for a more compact plant when it flowers. Since poinsettias in nature need 13 hours of uninterrupted darkness each day to flower, this regime must be carried out in the home if the plant is to flower. Setting your poinsettia in a dark closet every evening and removing it the following morning, starting in late September, is one way to accomplish this task. Once color development is well under way, this "long night" treatment can be discontinued.

Finally, contrary to the belief of some, poinsettias are not poisonous. Extensive testing conducted by The Ohio State University resulted in a clean bill of health for the poinsettia. So, enjoy your holidays by including a poinsettia as a part of your decor. You will be just one of millions of Americans who carry on this "new found" holiday tradition.

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Meet Adam Leonberger, Plant Diagnostic Clinic Director



My name is Adam J. Leonberger and I am the new director of the Plant Diagnostic Clinic at the University of Missouri, Columbia. I will be responsible for diagnosing plant health problems, weed and insect identifications and providing appropriate management recommendations in collaboration with State Extension Specialists. I am also responsible for conducting training

sessions for Master Gardener program, Pesticide Applicator Training, and other programs.

I was raised on the southeast side of Indianapolis, where I grew up in the garden helping my mother. I received a dual Bachelor of Science in plant biology and horticultural production and marketing and a Master of Science degree in plant pathology at Purdue University, West Lafayette.

I was bitten with the phytopathology bug during my undergraduate research project screening *Pythium* isolates from the Purdue Plant and Pest Diagnostic Laboratory for fungicide resistance to mefenoxam. When it came time to move on to a graduate degree, Purdue was the only one willing to develop a degree program with an assistantship in their diagnostic clinic working alongside the diagnosticians. My Master's thesis was focused on surveying *Phytophthora* species present in nurseries and greenhouses.

With my background in plant disease diagnostics, I hope to assist growers, extension agents, and homeowners by providing them with timely and accurate diagnoses and suitable control options. I look forward to working with so many great people here. Samples can be mailed to the clinic at 23 Mumford Hall, Columbia, MO 65211 or, you can drop the samples off in person at the same address. Photos and questions can be emailed to the clinic at plantclinic@missouri.edu. If you would like, you can call the clinic at 573-882-3019.

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According to the National Drought Mitigation Center's Drought Monitor map for November 30th, severe to extreme drought continued to plague the Bootheel region, where significant year end deficits had accumulated. These dry conditions, however, were tempered somewhat when significant rain events occurred toward the end of the month in the area.

As we march through the winter season (December, January, and February), the latest winter outlook from the Climate Prediction Center is calling for above normal temperatures over all of Missouri. Additionally, the outlook calls for above normal precipitation for the southeastern half of the state with the highest likelihood of this occurring

over the Bootheel region. Equal chances of above, below, and near normal precipitation are indicated for the rest of the state. Normal precipitation for the winter months in Missouri varies from just under 3 inches in the northwest corner to nearly a foot in the Bootheel.

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January Gardening Calendar

Houseplants

- **Weeks 1-4:** To clean heavily encrusted clay pots, scrub them with a steel wool pad after they have soaked overnight in a solution consisting of one gallon of water, and one cup each of white vinegar and household bleach.
- **Weeks 1-4:** Some plants are sensitive to the fluorine and chlorine in tap water. Water containers should stand overnight to allow these gases to dissipate before using on plants.
- **Weeks 1-4:** Wash the dust off of house plant leaves on a regular basis. This allows the leaves to gather light more efficiently and will result in better growth.
- **Weeks 1-4:** Set the pots of humidity-loving house plants on trays filled with pebbles and water. Pots should sit on the pebbles, not in the water.
- **Weeks 1-4:** Allow tap water to warm to room temperature before using on houseplants.
- **Weeks 1-4:** Fluffy, white mealy bugs on house plants are easily killed by touching them with a cotton swab soaked in rubbing alcohol.
- **Weeks 1-4:** Insecticidal soap sprays can be safely applied to most house plants for the control of many insect pests.
- **Weeks 1-2:** Quarantine new gift plants to be sure they do not harbor any insect pests.
- **Weeks 2-4:** Amaryllis aftercare: Remove spent flower after blooming. Set the plant in a bright sunny window to allow the leaves to fully develop. Keep the soil evenly moist, not soggy. Fertilize occasionally with a general purpose houseplant formulation.

Ornamentals

- **Weeks 1-4:** Gently brush off heavy snows from tree and shrub branches.
- **Weeks 1-4:** Limbs damaged by ice or snow should be pruned off promptly to prevent bark from tearing.
- **Weeks 1-4:** Check stored summer bulbs such as dahlias, cannas and gladiolus to be sure they are not rotting or drying out.
- **Weeks 1-4:** To reduce injury, allow ice to melt naturally from plants. Attempting to remove ice may damage plants further.
- **Weeks 1-4:** Use sand, bird seed, sawdust or vermiculite to gain traction on icy paths. Avoid salt or ice melters as these may injure plants.
- **Weeks 1-4:** Make an inventory of the plants in your home landscape. Note their location and past performance. Plan changes on paper now.
- **Weeks 2-3:** Sow pansy seeds indoors now.

Miscellaneous

- **Weeks 1-4:** Avoid foot traffic on frozen lawns as this may injure turf grasses.
- **Weeks 1-4:** Make a resolution to keep records of your garden this year.
- **Weeks 1-4:** Store wood ashes in sealed, fireproof containers. Apply a dusting around lilacs, baby's breath, asters, lilies and roses in spring. Do not apply to acid-loving plants. Excess ashes may be composted.
- **Weeks 1-4:** Check all fruit trees for evidence of rodent injury to bark. Use baits or traps where necessary.
- **Weeks 1-4:** Cakes of suet hung in trees will attract insect-hunting woodpeckers to your garden.
- **Weeks 1-2:** Seed and nursery catalogs arrive. While reviewing garden catalogs, look for plants with improved insect, disease and drought-tolerance.
- **Weeks 1-2:** Old Christmas trees can be recycled outdoors as a feeding station for birds. String garlands of peanuts, popcorn, cranberries, fruits and suet through their boughs.

Gardening Calendar supplied by the staff of the William T. Kemper Center for Home Gardening located at the Missouri Botanical Garden in St. Louis, Missouri. (www.GardeningHelp.org)