

## **Drought Information**

College of Agriculture
Extension and Agricultural Information, 1-98 Agriculture Bldg., Columbia, Mo. 65211, (314) 882-8237

June 23, 1989

## Drought may have long-term effect on horticultural plants

Ray Rothenberger, Department of Horticulture

Recent rains have eased the drought problems in many areas, but we still need to be concerned about the impact it had on established plants in landscapes. Recent calls have related to dieback and premature leaf drop in trees and some shrubs. While there are many reasons for such responses in plants, we can not overlook the impact the drought had on established plants.

In some cases a portion of the root system has died and the plant is existing on a much more limited root system. In spite of that, vigorous growth developed in the cool, less stressful weather of spring. Now as the heat arrives, a fully leafed tree or shrub does not have an adequate root system to support all the foliage. As a result some leaf yellowing and drop may result. At times leaves may drop without yellowing, causing concern. If there has been adequate rain in your area recently there is little cause for immediate concern, and the plant will gradually adjust and repair the damage. Where there still has been little rain, watering is important to reduce the stress if adequate water is available. Mulches can greatly aid the problem where water is still in short supply, particularly in the case of trees or shrubs planted during the past few years which still have limited root expansion.

Plants weakened from the drought also have become more susceptible to plant pests such as borers, or diseases such as verticillium. It is important now, and during the remainder of the growing season, to check carefully for the development of such pests on plants in the landscape.

Even where plants seem to be surviving well, as we most likely will again move into the hot and dry July, August, and September, where water is available, you can help trees and shrubs repair their roots with adequate watering during this period. At least an inch of water per week is necessary during normal summer temperatures, and as much as two inches per week during very hot periods.

We have also had several reports of plants that form flower buds in the late summer and fall, not flowering or not flowering well this season. Again, the drought and resultant poor food production in plants such as peonies prevented flower bud formation last fall. This can happen again if the drought persists. Such plants also benefit from mulch and late summer watering to help insure the development of flowers for next year.