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NEWS RELEASE FROM THE OFFICE OF:

Dennis Smith
County Extension Agent - Ag
Gregg County

GARDENING QUESTIONS

Spring and summer brings an abundance of questions to the Extension office concerning gardening problems. Squash and Tomatoes are two of the most popular crops grown by East Texas Gardeners. Following are some of the common problems and possible gardening solutions you may be encountering.

Q. Each year my squash blooms profusely but seldom produces any squash to eat. What is wrong?

A. Squash plants produce male and female blooms. For fruit to set, pollen must be transferred from the male to the female bloom. Pollinating insects, mostly bees, carry out this important job resulting in fresh squash for the kitchen. When treating the garden for insects and diseases, spray or dust during the late afternoon to avoid killing bees. Nematode infestations can also cause this problem. Check roots for galls.

Q. Why won't my squash set fruit -- they bloom and the blooms fall off?

A. Squash have male and female blossoms on the same plant (monoecious). The male blossom is borne on a slender stalk. The female blossom has the swollen embryonic fruit attached at its base. The blossoms of both sexes are open and fertile only during the morning hours of one day. During this time pollen must be transferred by bees or by a person using an artists paint brush or Q-Tip, the female blossom will close without being fertilized, the squash will not enlarge and in a few days it will drop from the plant to the ground. The male blossom may open a second day, but the pollen will no longer be fertile and the blossom will close, wilt and drop from the plant that day or the next. There are many more male blossoms than female blossoms on a squash plant. There may be 3 to 4 male blossoms opening for several days to a week before the first female blossoms open.

Q. My squash leaves are covered with a white, powdery substance. The plants die rapidly.

A. This is powdery mildew. It is a fungal disease that attacks squash, killing the plants. Some varieties tolerate this disease better than others. Powdery mildew is more of a problem in the fall than in the spring. Spray the plants with a good fungicide recommended for the control of powdery mildew. Mildew occurs most often on old foliage of declining plants. Succession plantings of squash will provide vigorous, productive plants and allow removal of older, more susceptible plants.

Q. My fruit blooms and sets young fruit, yet quickly becomes covered with a black, whiskery fungal growth.

A. This is Chaonephora fruit rot. It is soilborne disease which rots the young fruit. It is particularly damaging during extended wet periods. It can be controlled with a combination of treatments using foliar sprays of chlorothalonil, raised beds and open foliage varieties. This allows air movement to dry the soil and the foliage. Also, avoid planting squash on heavy, poorly- drained soils. Apply fungicides during wet periods.

Q. My fruit, as it begins to develop, is covered with a white fungus.

A. This is Phythium, commonly called wet rot. It is controlled by growing the plant on a raised bed, planting in a well-drained area and improving air circulation around the plants. Some varieties produce their fruit in the upper part of the plant so the fruit does not come in contact with the wet soil.

Q. Each year my yellow squash plants do a peculiar thing. Toward early to midsummer the plants which once produced yellow fruit start producing green or often yellow and green fruit. This is generally accompanied by a twisting or mottling of the leaves. What could possibly be causing this problem?

A. Your plants have been affected by a virus disease, most often squash mosaic virus or cucumber mosaic virus. This virus is transmitted to your plants by insects which have been feeding on other virus-infected squash plants or perhaps some wild plant. Once the plant gets this disease nothing can be done. Best preventive measures include insect control and planting varieties which will mature early in the year. This disease is more severe on late-planted squash or summer-planted squash than it is on the early spring-planted crop. The green squash (which should be yellow) is still good to eat if harvested at the proper stage of maturity. There will be little change in taste. This virus disease will eventually kill the plant.

Q. Each year my squash plants wilt and die about the time they start producing. Some have a yellowish or greenish sawdust- like material all over the vines. What could possibly be wrong?

A. More than likely, your problem is squash vine borers. If this is indeed the problem, the white, grub-like larvae can be found within the stem of the plant by cutting it open. The larvae hatch from eggs laid by a bright colored, wasp-like moth on the foliage or stems. The eggs hatch and the larvae travel down the plant to the stem and literally "core it out." To prevent this problem, begin control measures about the time the plants start to bloom by applying endosulfan (Thiodan) to the base of the plant. Once the grubs are inside the stem, it is almost impossible to control. During the fall growing season, begin treatment shortly after plant emergence.

Q. How do I keep squash bugs from literally destroying my plants?

A. Squash bugs are very difficult to control especially if control measures begin when the insects have reached a mature stage. For control to be satisfactory, apply insecticides early in the season while the insects are small. Applications, whether sprays or dusts, must be thorough with complete coverage. When utilizing these insecticides, the materials must come in contact with the insect to be effective. Apply the chemicals to the base of the plant, underneath the foliage and in some cases underneath the stems of the plant for satisfactory control. Removing and destroying egg masses on the bottom of leaves aids in control.

Q. My tomato plants look great. They are dark green, vigorous and healthy. However, flowers are not forming any fruit. What is the problem?

A. Several conditions can cause tomatoes to not set fruit. Too much nitrogen fertilizer, nighttime temperatures over 70 degrees F., low temperatures below 50 degrees F., irregular watering, insects such as thrips or planting the wrong variety may result in poor fruit set. Any of these conditions can cause poor fruit set, but combinations can cause failures. If Extension recommended varieties are used, the main reason tomato plants do not set fruit is because they are not planted where they can receive 8-10 hours of direct sunlight daily. Any less direct sunlight will result in a spindly growing, nonproductive plant with healthy foliage.

Q. I planted the tomato varieties which you recommended and they are loaded with tomatoes. Now the leaves are beginning to turn yellow, then brown, then die from the bottom of the plant. What should I do; will this kill my plants?

A. Tomato plants are developing brown spots on the lower foliage. This is the result of a fungus infecting the foliage causing a disease known as early blight. Early blight is an annual problem for most gardeners. It normally develops into a problem when plants have a heavy fruit set and the area has received rainfall. Spores from the fungus are spread to the lower foliage by wind and splashing rain. Leaves must be wet for infection to occur. At 50 degrees F. the leaves must be wet for 12 hours for infection, but at temperatures above 59 degrees F., the length of time for infection is only 3 hours. Leaf spot development is most severe during periods of cloudy days and high humidity. To control the fungus, foliage applications of a fungicide must be made every 7 days until moist conditions (dew included!) no longer exist. Applications should begin when

the first fruit is slightly larger than a quarter. Chlorothalonil (Ortho Multipurpose Fungicide or Fertilome Broad Spectrum Fungicide) and mancozeb hydroxide (Kocide 101) are fungicides used on tomatoes for early blight. The copper fungicides also are affective against the foliage and fruit-infecting bacterial pathogens. All listed fungicides can be mixed with insecticides or other fungicides except the copper-based materials (Kocide). The copper fungicides have a high pH which will reduce the life of many insecticides and some fungicides. Kocide is the only effective organic control for this pestilence.

Dennis Smith can be contacted at the Gregg County Extension Office by e-mail at dg-smith@tamu.edu or telephone at: 903-236-8429.

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