Hot temperatures often encourage unwanted weeds, pests, and diseases to make their appearance in gardens, landscapes, and lawns. The secret to keeping these marauders at bay is to be pro-active! Don’t just wait till the problem appears; practice good management skills that will prevent these harmful diseases and insects from entering your garden.

In this hot issue, I have provided information on how to prepare for the hurricane season, Pecan nut development and what to look for, how to deal with the hot, dry conditions in a vegetable garden as well as some tasty tips in the Fruit Corner. Local blueberries are in season, so grab a handful and reap the healthy benefits for your body. Don’t forget to try our delicious blueberry smoothie in the recipe corner.

Please remember to be smart, stay cool and well hydrated. Only work in the lawn and garden early in the morning or late in the evening once the sun goes down. We are having dangerously hot weather and we all need to be careful. If I can be of assistance to you please contact me at the Hoke County Cooperative Extension Center.

Happy Gardening,

Mary Hollingsworth
Horticulture Agent
Hoke County Center
Our Plants Need Water
This year has been unprecedented for weather extremes around the world. According to Scientific American Magazine, 2011 is officially among the most extreme weather years in history with 8 extreme weather related events in the first half of this year. In North Carolina, we have had one of the hottest summers on record and judging from the weather forecast there is no relief for the next couple of weeks.
With the change in our climate around the world we could continue to see our weather be unpredictable and uncharacteristic, so here are a few tips on how to deal with the extremes of Mother Nature’s weather on your vegetable plots.

Dealing with Drought on your Vegetable Plot
1. Buy a rain barrel and save the water to use during the late summer / autumn when we do not get much rainfall. Water early morning when the sun and temperature is lower. Avoid watering at midday when the sun is at its hottest otherwise most of the water will evaporate and not benefit the plant.
2. Vegetables or plants in containers need immediate attention when watering as the surface area of the soil is small and it dries out more quickly than a larger raised bed. Water until its runs out of the bottom of the pot and you can see it on the top of the soil surface.
3. Water ‘hungry’ vegetables first which are the ones that are just coming into fruiting and anything that stretches up above the ground that could wilt or break when falling over.
4. Once you have given your vegetable plot or allotment lots of water, mulch the area with compost, bark chippings, shredded newspaper or grass clippings to conserve the moisture in the soil.
5. Drought or water stress can give vegetables a bitter taste like cucumbers or could give carrots very hard cores.
6. Cover crops with shading netting to prevent rows from drying out to quickly.
7. Use sunken cardboard tubes, a clean tin can or large yogurt container with the bottom cut out and position into the soil next to plant roots so when watering plants they can benefit from direct watering and no soil surface evaporation can occur in the heat.

Strong Winds
Strong winds can be detrimental to tall vegetables or plant foliage so in areas of high winds they may need to be staked and netted to support their stems and leaves.
1. If your garden or allotment is open, create a windbreak like a small hedge or row of shrubs or even add some low fencing or a shed to block some of the harsh winds from blowing across your vegetable plots.
2. Check the wind direction at different times of the day by your vegetable plot to
gauge where to locate a wind break and double check you won’t be blocking the
sunlight,
3. Cold winds will dry out plants so try planting next to a wall where the sunlight
will warm up the wall during the day. This would work well for sun loving
vegetables like tomatoes and cucumbers.

Think Ahead ---- Be Prepared

Hurricanes and violent summer storms occur across North Carolina, and trees may be
vulnerable to blowing over or dropping large branches during high winds. Now is a good
time to evaluate shade trees to make sure they are in good shape.

Look at the overall condition of your trees. Trees that have large dead branches or whole
trees that are dead should be dealt with as soon as possible. Dead branches should be
pruned off, and dead trees should be removed.

A tree that is sickly, low in vigor and shows significant signs of rotten or decayed areas in
the trunk may need to be removed if it poses a threat to buildings. Trees with trunks that
have large cavities with extensive decay should be considered for removal because rot
weaken the trunk.

Trees that are one-sided or leaning significantly may need attention. Selective pruning
can relieve the weight on the heavier side, balancing out the weight distribution of the
canopy. After the prolonged rain associated with hurricanes, the soil may be so soft that
trees topple over if the weight is not proportioned properly.

Selective thinning of the canopy can reduce the wind resistance of the tree. This can
reduce the chances of it being blown over or of branches breaking. The idea is to preserve
the natural shape of the tree but to thin out branches to reduce the weight and allow for
better wind movement through the tree. A licensed arborist should do this.

Also, look for branches that hang over the house near the roof. Although the branches
may not touch the roof under normal conditions, the high winds of hurricanes and summer
storms can cause trees to bend and branches to flail around considerably. These branches
can cause extensive damage to the roof and generally should be removed.

Tomato Spotted Wilt Virus

Tomato spotted wilt virus is a viral disease that infects both tomatoes
and peppers. It is transmitted to plants by thrips, a tiny, dust-like
looking insect.

Unfortunately, it is hard to control this insect in a home garden.
Control of the disease is limited to cultural methods such as planting
date; utilization of resistant varieties, culling infected plant or
utilization of reflective plastic. Of these, resistant varieties are
perhaps our most effective control strategy.
What Does Tomato Spotted Wilt Virus Look Like?

There are several methods for identifying this virus. The first symptom usually appears in the terminal or growing point of the tomato. Look at the backside of the terminal leaves. Are the veins dark purple? This is a sign of the tomato spotted wilt virus. The leaves also will start turning black and curling up.

The entire plant will remain stunted compared to other plants in the garden. If the plant gets to the point where it can produce tomatoes, the fruit will have large yellow halos on them.

You’ll want to remove the plant from your garden and throw in the trash. Don’t put the infected plant in the compost pile.

Several people have already started seeing tomato spotted wilt virus in their fields and gardens. Some years are worse than others. Just be sure to watch out for thrips, check for the symptoms of an infected plant, remove any infected plants immediately and, if at all possible, plant tomato spotted wilt virus-resistant varieties.

Pecan Nut Development

If you have spent any time outside lately, you probably have noticed your pecan trees have catkins that already have released pollen or are preparing to do so. If you look closely, you probably can find a few nut clusters, especially on protogynous varieties.

Nut production by a pecan tree starts with the onset of flowering, and your tree has its largest possible crop at this time. Your potential crop can only decrease in size through the summer until the nuts finally reach maturity during the fall.

Every summer I receive numerous calls about immature nuts falling on the driveway or in the yard, so I thought I would spend a little time discussing why nuts abort during the growing season.

Most homeowners and many orchard growers probably will not even notice the first nut drop, which generally occurs in mid- to late May. This drop initiates shortly after pollination and generally consists of weak flowers as well as defective or improperly formed flowers. The number of weak flowers is often proportional to how stressed the trees were in the previous season. Highly stressed trees going into winter dormancy usually will have low energy reserves in the tree and produce many weak or defective flowers during the following spring. The drop is generally greater on short, non-vigorous shoots than on longer (more than 6 inches), healthier shoots.

The second drop typically is the one that ringing. This drop usually occurs in late to six weeks after pollination. For a pecan mature it must be pollinated (i.e., pollen transferred from the male flower or flower female flower or flower parts) and the fertilized. Unfavorable environmental as heavy rain or hot, dry winds during bloom can cause pollination problems. Therefore, the second drop is primarily due to a lack of egg fertilization. It is not unusual to lose a quarter of the crop during the first and second drop periods.
In addition, self-pollination can result in some nut abortion during the second and third drop phases. Self-pollinated nuts usually are smaller in size and are not as well filled as nuts that are cross-pollinated. This is one of the reasons we recommend planting at least two varieties of pecans.

The third drop generally occurs in July and usually does not involve a large quantity of nuts. But it has been shown to be accentuated by self-pollination. At fertilization, growth processes in the pistil produce an endosperm nucleus to form the endosperm, which will nourish the embryo. Studies of nuts that have aborted during this timeframe revealed a well-formed nucellus but no visible cellular endosperm. Therefore, premature shedding probably resulted from lack of nutritional support of the embryo.

The fourth and final normal nut drop during a season begins about nine weeks after pollination, usually in early August, and continues into September. This drop often causes greater concern to pecan growers because of the large size of the nuts at that time, although the percentage shed is generally less than 10 percent. Embryo abortion is considered to be the reason for this late drop. At this time, the embryo has grown to full size and the nut is on the brink of initiating shell hardening. The factors involved in embryo abortion at this stage of development are unknown.

Aside from the physiological conditions described above causing nut dropping, many other factors can produce some nut abortion during the growing season. A common cause of early nut drop is damage resulting from nut-feeding insects.

The pecan weevil is a small insect that which can have up to three generations during the summer, and it therefore can result in three periods of nut drop in pecans (typically mid-May, July and August). The first generation typically causes the most damage due to the small size of the pecan nuts. Damaged nuts will be characterized by an exit hole at the base of the nut covered by frass.

Puncturing of the ovary wall before shell hardening by feeding stink bugs and leaf-footed bugs usually will result in nut abortion in three to four days. Hickory shuckworm and pecan nut curculio also can cause nut drop during June and July.

A puncture normally can be seen on nuts damaged by insects. A white blotch frequently can be seen around the puncture made by shuckworm. Prior to shell hardening, pecan weevil and curculio damage appears as a dark staining fluid on the surface of the shuck. Shucks covered with circular, black to olive green lesions are infected with scab disease. Spraying for control of scab disease usually is not economical for yard trees since four to six fungicide applications per year often are needed to obtain control of scab disease. The scab fungus requires moisture on the leaves for infection to occur. Removing low limbs and providing good air circulation around the tree can reduce scab infection. Early infected nuts will drop if the problem becomes severe. Nuts infected later in the season will have reduced nut quality and/or poor shuck opening. Hence, any damage to the shuck results in poorly filled pecans. To control insect damage you can spray Sevin around the trunk of tree as far up as you can as well as spraying the ground around the perimeter of the tree.

Water stage in late July and early August is one of the most common times for environmental stress to increase nut drop. As the nuts move from size development into kernel formation the pecan sheds very easily. Any stress received by the tree at this stage
can result in major fruit drop. Some trees can lose up to one half of their crop if not properly managed during water stage.

Some of these factors are (1) severe drought causing water stress, (2) excessive water resulting in water-logged soils or water-split in the nuts, (3) hot, dry winds increasing water loss or (4) high winds from hurricanes or thunderstorms causing physical damage that disturbs the ovary wall of pecans, resulting in nut abortion.

Nutritional problems from shallow soil or poor fertilization can cause pecans to shed throughout the year. If the embryo aborts after the shell hardens, the nut usually matures, but will be hollow.

If you notice nuts beginning to drop from your trees this summer, consider the time of the year and if it could be one of the physiological drops described above. But also examine the nuts for physical damage as a result of insect feeding, disease or environmental stress. If you are unable to determine a cause for the drop, contact the Extension Center.

Charlie Graham

The Fruit Corner

Blueberries

Few things are closer to perfection than the first sweet berries of blueberry season. Nothing beats the flavor of a juicy, sun-ripened homegrown blueberry picked right off the bush. North Carolina’s blueberries are in season and it’s the perfect time to make a homemade blueberry cobbler or some scrumptious blueberry jam. Support local farmers by buying locally grown blueberries. If you would like to know where you could purchase homegrown blueberries stop by the Extension Center for a list of growers. Here are some interesting facts that you might not know about blueberries.

Nutrition Facts: Blueberries are low in calories and high in nutrients. One cup of blueberries contains 57 calories. Blueberries are a great source of antioxidants. They also contain vitamin A, vitamin C, vitamin E, fiber, and folic acid. Folic acid is especially important for childbearing women.

Selection: Choose fully ripened, blue berries. Blueberries do not ripen after they have been picked. Berries should be plump and have a natural blue shine. Use blueberries as soon after picking as possible for the best flavor and highest nutritional value.

Storage: Store blueberries in the refrigerator, covered, and unwashed. When you get ready to use the berries take them out of the refrigerator, wash and serve.
Blue Buster Smoothie
6 oz. blueberry yogurt
1/2 cup apple juice
1/3 cup fresh or frozen blueberries
1/3 cup frozen sliced peaches
Approx. 5-6 ice cubes
Blend all ingredients with ice (amount of ice will vary depending on desired consistency). Pour into a glass and serve chilled.
Servings: 1

Everything Is Peachy Keene
1 can peach or apricot nectar
1 carton low fat peach yogurt
1 banana (sliced & frozen)
8 peach slices (fresh or frozen)
6 ice cubes
Place all ingredients in a blender and process until smooth.

Tips for Making Smoothies
Freeze the fruit for a frostier drink.
Avoid sweetened frozen fruit as this adds calories and may make the drink too sweet.
Trouble getting the yogurt out of the container once it has been frozen? Try spooning the yogurt in an ice tray for yogurt cubes. Once frozen, pop the yogurt from the ice tray and place in freezer bags for later use. Frozen yogurt cubes will allow you to add any amount of yogurt to the smoothie for consistency adjustment.
Freeze fruit juice in ice trays. Once frozen pop the juice from the ice tray and place in freezer bags for later use. Frozen juice cubes also will allow you to add any amount of juice to the smoothie for consistency adjustment.
If the smoothie is too thick add more fruit juice to the recipe.
If the smoothie is too thin add more fruit or yogurt cubes.
When making smoothies always add the liquid first, and then add the other ingredients such as yogurt, fruit and ice to prevent burning up the blender.
Always start the blender at low speed and increase the speed until the mixture is smooth.