Sheep and goats in summer heat and humidity

By: Jodie Pennington

Management of sheep and goats in summer heat can be a challenging task for some producers, especially those producers with wool sheep. Heat stress decreases growth rate, reproductive efficiency and profitability. The two most critical factors are to provide access to shade and water at all times for the animals. Extreme heat is stressful to livestock, as well as people. However, the animals do not get the relief that people get when they go to air conditioning. The extreme heat is confounded by the relatively high humidity that we experience here in Missouri.

**Signs of heat stress** include bunching in the shade if it’s available, slobbering, high respiratory rates (panting), high body temperature, and open mouth breathing. In severe cases of heat stress, lack of coordination, trembling, and down animals may be seen. Heat-stressed animals should be moved to a cool, shaded area with good air circulation.

If you see many or severe signs of heat stress, minimize the stress immediately, but handle the animals gently to avoid increasing their stress even more.

Some animals may be affected more than others. Animals with other stresses such as heavy lactation, parasites, and other health problems may be more affected by heat stress. These animals are often the first and the most severely affected in the herd. Prior respiratory disease resulting in lung damage may make animals less able to cope with high humidity and temperature. If an animal’s health problems are on-going, administer treatment with extra care. Culling these poorer animals should be considered. Dark animals are generally more susceptible to heat stress than light colored sheep and goats.

**What to do:** Offer adequate shade and fresh water. Shade will reduce heat loads. Water will help dissipate heat. Water consumption is driven by environmental temperature. Water consumption at 70 degrees F may increase by 50% and by almost 100% at 80 degrees F. Always keep good quality fresh water available at all times for the sheep and goats. Heat stress can be lessened by providing water via sprinklers and using fans to aid in evaporating the water. Good ventilation is the key to cooling animals—with or without water. Use care with a sprinkler as misting can add to the humidity. With sheep, water can make the wool less able to dissipate heat.

Mature trees provide excellent shade (and shelter) and are usually the least-cost alternative. If natural shelter is not available, many sheep and goat producers use wooden or metal huts, plastic calf hutches, and/or movable structures to provide shelter for grazing animals. The shelters should be well ventilated. Simple shade structures can be constructed from shade cloth, mesh fabric, tarps, canvas, or sheet metal. Movable shade structures are best used in intensive rotational grazing systems. All livestock should be able to lie down in the shade structure or area at the same time. Lying down in a cool spot provides additional relief from the heat.

Avoid overworking the animals if they are heat-stressed. Body temperatures of sheep and goats tends to peak in the early evening, declining in the night to reach a low point in the hours after sunrise, then slowly building throughout the day. Work the animals in the early morning, and avoid afternoon/evening work when body temperatures are already high. If possible, under prolonged heat stress conditions, avoid working the animals at all. If at all possible, avoid transporting sheep and goats during periods of heat stress. If transportation can’t be delayed, do it during the early morning hours or early evenings to minimize any additional stress.

**Other factors to consider** with heat stressed animals include decreased fertility, and decreased forage consumption which affects growth. High environmental temperature in the days after breeding has been associated with increased early embryonic loss in most animals. Fertilization appears to take place normally, but embryo development is delayed or altered when environmental temperatures are consistently above 90 degrees F. Even if bucks or rams do not show physical signs of heat stress, semen quality can be compromised.

**Continued on Page 3..........................**
Test Your Grain Marketing Skill without Fear of Failure!
Mark Jenner, Ag Business Specialist
Market values in farming don’t stay the same for very long. Farm prices are like Missouri weather. We don’t have to wait very long for a change. Marketing commodities ahead of harvest usually takes a lot of concentration and carries some big financial risks, but not this summer!

In July, University of Missouri-Extension will coordinate the “Show-Me Market Showdown.” This is a free, educational, online grain marketing game for farmers, Ag professionals and other interested people. This game is a simulation that will enable players to enhance their grain marketing knowledge and skills. The Show-Me Market Showdown will run from July 14th to September 19th.

The game website is linked to real-time market information allowing players to execute virtual market transactions. The website monitors player market positions, executes trades, and summarizes players’ virtual marketing account balances. Although the game is competitive, the main focus of the game is to demonstrate the risks and rewards of alternative marketing strategies and to learn the mechanics of various marketing tools, like futures contracts, options on futures, and forward contracts.

To this end, the University of Missouri Extension will offer players guidance and marketing instruction through weekly educational e-mails and a game blog. The e-mails and blog will provide a valuable means of discussion among the game coordinators and participants.

In addition to being fun and educational, participation in the Show-Me Market Showdown is extremely flexible and risk-free. Players can access the game whenever they have time and wherever they have access to the Internet. While all trades in the game utilize real market quotes, players have no risk of financial loss by participating in the game. Funding for this project is provided by the North Central Risk Management Education Center and the USDA, National Institute of Food and Agriculture. As a result, participation in the game is completely free.

Currently the easiest way to register on-line for the Show-Me Market Showdown is to ‘Google’ or search for the words, “Show-Me Market Showdown” in Google or Yahoo search. You can also register from the Lafayette County Extension Website. Once you get to the Show-Me Market Showdown registration page, just log in. If you have any difficulty, contact me, Mark Jenner, University of Missouri, Ag Business Extension Specialist in Bates County, at 660-679-4167, or by email at jennermw@missouri.edu.

We are excited to offer the farming community a chance to play in our ‘Show-Me Market Showdown!’ I hope to see you in the game!

There’s more to a home's cost than the purchase price
By: Janet LaFon
Summer is often a time when people make changes in where they live due to new jobs, graduation, or just being ready for a new or different home. For most families who buy homes, it is the largest single purchase ever made. But too often, it is a purchase that is handled with haste and inadequate preparation. Many people usually begin looking at homes before they’ve determined how much they can afford to spend. This makes them extremely vulnerable to all the eye-catching, attractive features that can add to the cost not only in dollars but in time and energy for maintenance.

Where should families begin when thinking about buying a home? The first step is to take a good look at themselves. What are their needs, now and in the future? What is the size of the family, and what are the ages of the family members? For example, a family with growing children will need more of their income for food, clothing and education, and have less money for a house than an individual, a childless couple or a household where the children have left home.

Families should also consider lifestyles, such as how much time is spent at home and if they entertain a lot. Next, they should determine how much they can afford to spend on a house. A very general rule of thumb is to spend between 20 and 35 percent of after-tax income on housing. But be sure to remember all that this has to cover.

First of all, the loan itself requires monthly mortgage payments. Each payment consists of two parts – principal and interest. The principal part of the payment is returning the money borrowed, and the interest part is paying the lender for the use of the money. Typically, a longer term means lower monthly payments. But the overall cost of the loan will be higher because of the interest that will have to be paid.

Families need to remember that there are more costs than just the mortgage. Most are considered operating costs and include taxes, insurance, utilities and maintenance. Also, household furnishings are often overlooked. Some furnishings may come with the home, or some things may be used from the previous residence. But in most cases, some new things will be needed, and in time items will wear out and need to be replaced.

This may sound a little discouraging to the potential home buyer, but it’s important to consider all of the facts before getting into a deal that you may regret later.

IT’S FAIR TIME!!!! Check your area for dates and events happening at a fair near you! If you are planning on entering exhibits or animals to be judged at the fair now is the time to be filling out your forms and submitting them. Contact your local Extension Office for fair information.

SHOW-ME MARKET SHOWDOWN
JULY 14 - SEPT. 19
ON COMMODITY CHALLENGE.com
Missouri’s New Pasture Invader
By: John Hobbs

Spotted knapweed, a noxious weed was first detected in our area seven years ago. The weed seed was most likely purchased in a pasture seed mix or brought into SW Missouri in straw or hay bales. Since that time this noxious weed has expanded more rapidly than could be imagined. Heavy infestations of this weed can now be found concentrated along highway right-a-ways. The plant seed is easily distributed with the movements of equipment and hay. Observations along the roadways confirm significant pockets of these weeds in McDonald County of which some have spread into adjacent pastures. Landowners should be aware of possible infestations if they see the plant in right-a-ways. Spotted knapweed will be the most aggressive perennial weed to impact hay and pasture fields in Missouri, even more than the musk thistle. This plant can produce as much as 1000 seeds per plant. The western United States has struggled with the weed for many years and it has only recently become a problem for us. The plant is attractive and resembles the bloom of red clover. Currently, the plant is 1-3 feet tall. The problem with this weed is that it can completely take over hay fields and pasture land as indicated by the picture. Livestock avoid eating the plant while it crowds out desirable grasses and legumes. Plant seeds are inadvertently spread through the actions of hay hauling and mowing. It is also likely vehicles venturing into infested areas have contributed to plant distribution. My recommendations are to control the plant as soon as you see it. In small areas around the house you can pull it up and burn it. It may also be spot sprayed utilizing a glyphosate product such as Roundup or one of the many other products containing this active ingredient. For pasture and grass hay fields there are several broadleaf herbicide options depending on knapweed state of maturity and use of the forage. At the current state of knapweed development and according to University studies Milestone at 5-7 oz/Acre or GrazoNext at 2-2.6 pt/Acre can provide effective control. Refer to product labels for herbicide use restrictions regarding grazing, hay harvest and replanting. The application of broadleaf herbicides will injure legumes such as clover and alfalfa.

The best knapweed control program is early detection and eradication. Avoid spreading this weed seed on farm machinery. Don’t purchase hay containing knapweeds and utilize only certified seed when planting. Manage hayfields and pastures to promote dense grass growth and this will help to reduce knapweed invasion. For more information contact your local University of Missouri Extension office.

Long-neck Seed Bugs Beneficial in Strawberries
By: Jill Scheidt

Long-necked seed bugs are a beneficial insect in strawberries. The long-necked seed bug is 3/8 inch long. The head is black, and they appear to have a neck. The wings are brown with yellow etched lines. The legs are slender and yellowish with black knee joints. The antennae have four segments; the first and last segments are black and the middle antennae segments are orange in color. Long-neck seed bugs are classified in the hemiptera order and the heteroptera suborder, meaning they are a true bug, like aphids, stinkbugs and leaf hoppers. They have piercing, sucking mouthparts, meaning their mouthparts look similar to a beak, like a hummingbird. They can be found under leaf litter in early spring and in fields and under artificial lights in the summer. Long-necked seed bugs overwinter in woodland and migrate to fields in the spring and summer; they are attracted to lights. According to Richard Houseman, University of Missouri plant sciences professor, long-neck seed bugs will sometimes feed on strawberry seeds but are rarely a threat needing treatment. They primarily feed on other small insects.

Continued from page 1…..

Semen quality tends to decrease 1 to 2 weeks after an acute, severe heat stress and will persist for an additional 4 to 8 weeks when fertility of the males will be decreased. Forage quality tends to decrease during hot weather so it is important to provide good quality forage to the heat-stressed animals. Additionally, lower quality feeds often have a high increment or heat of digestion so poor quality feed can add to the heat stress.

Goats tend to tolerate heat better than sheep. Goats with loose skin and floppy ears may be more heat tolerant than other goats. The heat is especially hard on fat animals. Lactating animals are more susceptible to heat stress than dry or non-lactating animals, although there can be differences related to the different levels of production. Any animal with a poor nutritional status (either too fat or skinny) or compromised immunity with health problems will be more susceptible to heat stress.

Wool sheep should be sheared to decrease heat stress. Crossbred hair sheep or hair sheep that do not shed the hair/wool well should also be sheared to reduce heat stress.

In summary, provide adequate water and shade for all sheep and goats during the