Managing Beef Cattle During Cold Weather

Cold weather can have a tremendous impact on the performance of cattle. In fact, it can have as much of an effect on production as hot weather. Understanding how cattle deal with cold will help you understand how to bring cattle through winter without losing performance or wasting resources.

First, understanding some terminology is important. The thermo neutral zone is the range of temperature where performance is at its peak. The lower critical temperature is where cattle begin to experience cold stress. In an ideal environment, that temperature is 32 degrees F. But other factors, such as wind and rain, make a higher air temperature seem colder to cattle. This is called the effective temperature. So, a 10 mph wind can create cold stress even when the air temperature is 40 degrees F and the cattle have a dry winter hair coat.

The most logical way to combat cold stress is to provide shelter from wind and rain. Building new wind breaks and shelters is likely cost-prohibitive. Planning pasture rotation so that cattle are in areas with shelter during winter months is often a better option. If cattle are not able to avoid cold, their metabolic rate will increase because the heat from normal body function is not adequate to maintain their body temperature. The increase in metabolism will make the cattle require more energy for maintenance. Simply stated, when cattle are cold stressed, they need to eat more just to stay warm. Energy intake requirements can increase up to 20 percent. That can translate into 3.5 to 4 extra pounds of hay intake or 2 to 2.5 extra pounds of supplement. A good rule of thumb taken from several studies is that for every degree below the critical temperature, a cow’s energy requirement increases 1 percent.

It is also very important to keep water available because decreased water intake can reduce feed intake. Be sure to break ice in waterers and on ponds so cattle have access at all times. Anticipating the increased nutritional need from prolonged cold stress can provide some flexibility. It is a good idea to maintain cows in a body condition score 5 and heifers in a body condition score 6 so that they have energy reserves to draw from if nutrition is lacking. Mud also has an effect on nutrient requirements of cattle. Rotating feeding areas or improving rations for cattle that constantly have to deal with mud can improve performance. For herds that calve late into the winter months, it will be important to check calves born in extremely cold weather. Especially when it is wet and muddy (the ground has not frozen yet). If calves are dropped in mud or water, they can experience fatal cold stress very quickly. Even if calves are not lost to cold stress, it can negatively affect their immune system. Make sure that they have colostrum in the first 12 hours after birth. Again, make sure that younger cattle have some type of shelter from driving wind.

The best ally for handling cold stress is to be prepared. Anticipating increased hay, winter forage and/or supplement needs will ensure the cattle do not go without. But, remember that cattle are made to live in inclement weather. Providing adequate nutrition and some simple shelter should ensure that they remain healthy and productive through the winter.
Next step – build your goal into your spending plan. Where will you get the money from? Buy less, so you don’t waste. Do you need designer bathing products, or could you hold off buying until you run out? Do you need another gadget? What about buying less bottled water, drinks etc.? Other subtle changes that you can add up over time.

Tax time is here! What is your plan for your ‘personal lottery?’ If you receive any size refund, what are your plans for that money? Suggestion – save all of it until June 30, 2013. That gives you an opportunity to think about the most important ways to use the money to maximize your refund. Cannot make it until then? Keep your refund in your savings account until the end of April – then while it earns a little interest, write down what financial goals you would like to use the money towards, even if it is to leave it in the savings until September.

Considering your financial literacy state you may want to also consider some other items:

- How is your debt to income ratio?
- Have you seen your credit report?
- Are your investments diversified?
- Do you have at least 6 months of living expenses saved up?
- Are you adequately insured? Health, life, home and car.
- Are your financial records in order?
- Do you have an up-to-date, signed will?
- Did you review your withholding when you completed your taxes?
- Are you planning for retirement?
- Do you know where your retirement income will come from?
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If you are advanced in your financial literacy, be sure to keep reviewing your plan and update as needed. If you are new to being organized, make goals attainable and have a few more ready to begin working on.

City Page 3

Why is it important to be financially literate and what does that mean, anyway? Have you ever changed your spending habits? How do you keep track of your spending? Have you thought about ever changing what you do with your money? How you spend, why you spend, why you are not saving? Maybe because you don’t know or see any benefit? No, you should know that you are making good use of your personal money. Saving will not get you anywhere. Having a spending plan doesn’t really work.

Some people make resolutions and by the end of the day have already forgotten about what they were resolving to do. Yes, it takes 21 days/times/occurrences to form a new habit, managing money will take that kind of dedication, however, what you gain from sticking to it will help your bottom line. Maybe the plan is not realistic or you haven’t thought about how you would like to change financially. Married or single? Regardless, first step, write down what you like and do not like about your financial situation. Write down action steps to make changes. Spouses need to do a list for themselves and then a joint list. This should be a conversation not a fight. Be specific about the change. Example, build emergency savings account by $500 within six months. If you receive 24 paychecks, this could be accomplished by saving $42 from the first twelve paychecks to get your savings account up once you begin, keep saving that $42 a paycheck and by the end of the year you will have saved $1000.00. Keep it growing, do not have your savings account accessible while you are in the building mode.

City Page 4

On average, we spend about $1100 on food eaten away from home each year – that equals $21 per week eating out. Whether it’s carry-out, the office cafeteria or a sit-down restaurant, there are smart choices everywhere. Try these 30 tips to help you eat more healthy when eating out.

- Plan ahead and consider what options are available while looking for restaurants or carry-out with a wide range of menu items.
- Take time to look over the menu and make careful selections, especially if the menu includes a special section for healthier choices.
- Look for clues on the menu which mean less fat and calories: baked, braised, broiled, grilled, poached, roasted, steamed.
- Menu items that can mean more fat and calories: batter-fried, pan-fried, buttered, creamed, crispy, breaded. Choose these foods occasionally and in small portions.
- Order regular or child-size portions rather than super sizing which oftentimes is more than you need.
- For a lighter meal, order an appetizer in place of a main course.
- Make special requests, just keep them simple. For example, ask for a baked potato or side salad in place of french fries; no mayo or bacon on sandwiches; sauces served on the side.
- Use a small plate to fill up on salads and veggies first, taking no more than two trips.
- When grabbing dinner at the supermarket deli, select rotisserie chicken, salad in a bag and a loaf of bread, or lean roast beef, onion rolls, potato salad and a fresh fruit.
- When eating on the go, tuck portable, nonperishable foods like peanut butter and crackers, granola bars, a piece of fresh fruit or trail mix in your briefcase, tote or backpack.
- Be size-wise about muffins, bagels and biscuits as jumbo sizes have twice the fat and calories.
- Try a smoothie made with juice, fruit and reduced-fat yogurt for a light lunch or snack.
- Refrigerate carry-out foods that won’t be eaten right away.
- In place of fries or chips, choose a side salad, fruit or baked potato.
- Look for a sandwich wrap in a soft tortilla.
- Build a better breakfast sandwich using a whole grain English muffin or bagel with Canadian bacon or ham rather than bacon or sausage.
- Share an extra large sandwich or main course with a friend or take half home for another meal.
- Boost nutritional value in sandwiches by loading up on the vegetables choices.
- Think about your food choices for the entire day. If you are planning a special restaurant meal in the evening, have a light breakfast and lunch.
- Limit alcohol which tends to increase your appetite by providing calories without nutrients.
- Avoid all-you-can-eat specials, buffets and unlimited salad bars if you tend to eat too much.
- Try a smoothie made with juice, fruit and reduced-fat yogurt for a light lunch or snack.
- Pass on all-you-can-eat specials, buffets and unlimited salad bars if you tend to eat too much.
- When choosing a buffet, use a small plate to fill up on salads and veggies first, taking no more than two trips.
- Load up pizza with vegetable toppings and if meat is added, make it lean.
- Choose a side salad, fruit or baked potato.
- Look for a sandwich wrap in a soft tortilla.
- Build a better breakfast sandwich using a whole grain English muffin or bagel with Canadian bacon or ham rather than bacon or sausage.
- Be size-wise about muffins, bagels and biscuits as jumbo sizes have twice the fat and calories.
- Try a smoothie made with juice, fruit and reduced-fat yogurt for a light lunch or snack.
- Refrigerate carry-out foods that won’t be eaten right away.
- When grabbing dinner at the supermarket deli, select rotisserie chicken, salad in a bag and a loaf of bread, or lean roast beef, onion rolls, potato salad and a fresh fruit.
- When eating on the go, tuck portable, nonperishable foods like peanut butter and crackers, granola bars, a piece of fresh fruit or trail mix in your briefcase, tote or backpack.
- For desk top dining, keep single-serve packages or crackers, fruit, peanut butter, soup or tuna in your desk for a quick lunch.

Source: Academy of Nutrition & Dietetics, Bureau of Labor Statistics

Happy Financial Literacy Month
Marian Ross, M. S. County Extension Agent
Family and Consumer Sciences

Happy New Year!

Extension in the City
Marian Ross, M. S. County Extension Agent
Family and Consumer Sciences

Here’s to 2013!

Extension in the City
Darlene Myatt
Extension Agent - Expanded Food & Nutrition
The Master Wellness Volunteer Program is an educational campaign with the Texas A&M AgriLife Extension Service (AgriLife Extension) focused on helping Tarrant County residents learn how to make healthy lifestyle choices. The mission of AgriLife Extension is to improve the lives of people, businesses, and communities through high quality, relevant education. Volunteers are critical to fulfilling this mission, and they will assist in delivering wellness programs to area organizations, businesses, and other community groups.

Participants in the Volunteer Program will receive 40 hours of health and wellness education. Upon completion of the training, participants are expected to return 40 hours of volunteer service. There will be numerous opportunities and methods for participants to volunteer within the program.

Five training classes will be conducted from 9 a.m. to 3 p.m. in Spring 2013. The training will be a combination of in-class and self-study education. It will include information on basic nutrition, food safety, health education, weight management, trends in health and nutrition, public speaking, and more!

After completing the training and giving back 40 volunteer hours, participants will become a Master Wellness Volunteer.

If you are interested in participating, please contact Markena Minikon, County Extension Agent – Nutrition & Health at markena.minikon@ag.tamu.edu or 817-884-1576.

There is a $50 application fee that covers the cost of training, including all educational materials.

It is required by AgriLife Extension that all volunteers have a background check. You will receive a release form on the first training date. It will be submitted to the Volunteer Center of North Texas for completion of a Criminal Background Check, which will be kept on file at AgriLife Extension.

For years, moms everywhere have been telling their kids that breakfast is the most important meal of the day. If you were anything like me, this was in one ear and out the other. Why exactly is breakfast supposedly the most important meal of the day? I used to say, if I had to choose between more sleep and eating breakfast, I’d choose more sleep. But when I got a little bit older and made time to eat something, I found that I had more energy than I did when I just chose to sleep in. I also felt better and was less worn out during the day. Hmm...maybe mom had a point. So what do the experts have to say about it?

According to choosemyplate.gov, eating a nutrient-dense breakfast may help you lose weight and keep it off, while people who skip breakfast often weigh more. Starting with breakfast also helps you meet your food group needs (grains, fruits, vegetables, protein, and dairy). A variety of fruits can bring you near the minimum number of five daily fruit and vegetable servings recommended for lower cancer risk. You can even try a variety of vegetables in an omelet. In fact according to the American Institute for Cancer Research, eating more vegetables and fruits, exercising regularly, and maintaining a healthy weight could cut cancer rates by 30 to 40 percent.

After fasting all night, breakfast can jump start your energy level, “breaking the fast,” if you will. Amery Regional Medical Center states that if you choose healthful, slow-burning foods, like whole grains and fruits, you should be able to control your appetite until midday. Overeating throughout the day is also less likely. Studies show that people who skip breakfast tend to make up for the calories later in the day, often with unhealthy, high-fat and high-calorie convenience foods.

Eating breakfast has also shown to increases the metabolic - or calorie-burning - rate. So as a result, you have more energy and weight control is easier. You should be careful of foods heavy with refined sugars, like pastries and sugary cereals. While these foods may give you an initial boost of energy, it doesn’t last for very long. They can even make you feel more drained and hungry, even if you ate breakfast. You want to be sure to get the most nutrition out of what you are eating. In order to avoid the “crash and burn” effect, choose whole grain breads and cereals (with low sugar content), fresh or canned fruits (in unsweetened juice) and even foods that are not usually served for breakfast. For example, a bean spread like hummus on whole wheat toast. Choosing foods like this will give you longer-lasting energy.

You should also try to plan your breakfast. You may want to assign different days of the week a different kind of breakfast. Examples include: at home breakfast, on the go breakfast, at the restaurant breakfast, at work breakfast, or in the car breakfast. Because honestly, who has time to prepare and eat a 5 star cuisine every morning? By planning your breakfast you will cut down on making those snap decisions at the last minute that often times lead to just picking up donuts or ordering a 300 calorie egg muffin rather than a 150 calorie parfait. If you plan healthy and buy healthy, then you don’t leave yourself much of a choice. And soon you’ll be on your way to a healthier more energized you.

So thanks mom! Your words were definitely not in vain.

Resources: choosemyplate.gov, amerymedicalcenter.org, fcs.tamu.edu

Melissa Crawford
Extension Assistant - Better Living for Texans
Peaches have been grown in Texas for more than 100 years. They have become established as commercial crops at Fredericksburg, Tyler, Mexia, Pittsburgh, Weatherford, Montague, Charlie and Thornberry, where deep, well-drained soil, proper varieties, necessary chilling and good orchard management make crops successful. In addition to these factors, the performance of peach trees depends heavily on proper annual pruning.

Peach tree pruning is a hard, labor-intensive, cultural practice that is easy to neglect or compromise. However, if peach trees are left unpruned, the result is weak trees, overproduction, increased disease and most importantly, short tree life. Peach blooms and bear fruit on second-year wood; therefore, the trees need to make good growth each spring and summer to insure a crop for the next year. Each winter, a large number of red, 18- to 24-inch shoots need to be present as fruiting wood. If the trees are not pruned annually, the volume of fruiting wood reduces each year, and the fruiting shoots move higher and higher, soon becoming out of reach. Alternate year pruning results in excessive growth the year following heavy pruning, so annual moderate pruning is essential for the long-term control of tree vigor and fruiting wood.

Late spring frost is the most significant factor in Texas peach production, and the grower does not want to prune too early. The peach tree will bloom soon after pruning when its chilling requirement is satisfied and warm weather follows. Growers with only a few trees can wait until “pink bud” to prune. Growers with large crops should not prune earlier than necessary. Pruning in Texas should occur at least by February, just prior to bloom in March.

The main idea in pruning is to remove old, gray-colored, slow-growing shoots, which are non-fruiting. However, leave 1-year-old, 18- to 24-inch red-bearing shoots. Removing 40 percent of the tree annually stimulates new growth each spring. The second objective of pruning is to lower the fruiting zone to a height that makes hand-harvesting from the ground possible. A third objective is to open the center of the tree; this increases air circulation, reduces disease pressure and allows sunlight into the tree to accelerate fruit color. Another goal of pruning is to remove diseased or dead shoots, rootstock suckers and water shoots.

Pruning a mature tree:

- **Step 1** - Remove all hanger shoots, rootstock suckers and water sprouts in the lower 3 of the tree. This stripping of lower growth clears a path for herbicide applications and allows air circulation.
- **Step 2** - Remove all shoots above 7 feet, other than red 18- to 24-inch fruiting shoots. Cuts need to be selected points where the scaffold and sub-scaffold limbs extend upward at a 45- to 50-degree angle. Cuts that leave limbs sideways at a 90-degree angle should be avoided.
- **Step 3** - Remove all shoots which grow toward the inside of the tree.
- **Step 4** - Remove all odd, gray wood in the 3- to 7-foot fruit production zone.

The key to long peach-tree life in Texas is planting in deep, well-drained, sandy soil, control of peach-tree borer, scale insects and weeds, and correct pruning. Fruiting will depend on escaping spring frosts. Good luck and enjoy all of those wonderful peaches.

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The best time to plant a tree was 20 years ago. The second best time is now.”—Chinese Proverb

This saying has been used to inspire people to start doing all sorts of things they should have already begun like saving money or returning to school, but when it comes to literally planting a tree in Texas, now is truly the best time.

Texas A&M Forest Service surveys indicate that the historic drought of 2011 killed 301 million trees in rural areas and 5.6 million trees in urban areas. Here in Fort Worth, City Forester Adams reports the removal of 1,800 dead trees from parks and parkways, a dramatic increase over a typical average of 500 per year. Because drought stressed trees will be slowly dying for the next five to ten years, the full effects of the drought on tree numbers may never be measured. There has clearly been a great loss of Texas trees in the past few years, and even though there’s a bummer crop of acorns this fall across the state, nature could use a little help from its friends. This is especially true in urban areas.

Regional Urban Forester Courtney Blevins completed a canopy analysis of Tarrant County in November 2011, well before the full impact of the drought, and found that only 23.6% of the total land area is covered by tree canopy. Contrast that with 27.2% covered by impervious surfaces and it is easy to see that there is more hot pavement than cool shade in this neck of the not-so-woody woods.

That same analysis classified 23.2% of the county as plantable, which is defined as all non-agricultural use, treeless locations where a tree could and should be planted. Areas under power lines, golf course fairways, sports fields, etc. or sites where there is open ground but not enough room for a mature tree are not included.

Tarrant County Canopy Analysis—November 2011

Another way to discuss the best time to plant is by time of year. Container grown trees can be planted at any time of year but the heat of the summer is the most difficult time to successfully establish a newly planted tree. Bareroot and balled and burlapped trees should only be planted during the winter.

If the time to plant is indeed now, and the place is here, all that’s left are the details.

- Choose right tree for the site
  - The Texas Tree Selector is a great online tool http://texastreeplanting.tamu.edu/

- Choose the healthiest tree available
  - Look for a single trunk and a strong central leader
  - Look for an obvious root flare at the base of the trunk
  - Look at the roots—avoid trees with roots that circle the container

- Follow recommended planting procedures
  - Don’t plant too deep
  - Fill the hole with the native soil. Do not amend. There is no way to amend the entire area where a tree’s roots will grow

- Water
  - Smaller trees establish more quickly, but all trees need supplemental irrigation. Plan to deliver water (1-3 gallons per inch of caliper) daily for two weeks and weekly for three months per caliper inch. A two inch caliper tree should be established in about six months.

- Mulch
  - Apply 2-4 inches over the root ball. Pull mulch away from the trunk of the tree
  - It moderates soil temperature, reduces water loss, keeps weeds away and makes the tree much less susceptible to string trimmer and lawn mower damage

If you don’t have any plantable space, get involved in community tree planting efforts.

“The best time to plant a tree is now.”—Texas Proverb 2012
Everyone is energized and ready to be a better version of themselves. This is a time of increased awareness, when gyms report record numbers in new membership, financial management and healthy eating classes are at capacity and non-profits who rely on volunteers enjoy a larger network of helping hands. While all of these things are important, maybe we should all resolve to play more. Think back to simpler days when hours were spent outdoors playing numerous games and having countless adventures. A time when TV and technology did not consume us, when entertainment came in the form of something created not bought. Resolve to play more and the benefits probably will include getting in shape from all of the running and jumping as well as saving money by trying one of the games detailed below. Happy playing!

The following ideas were found on family.com from the article, 10 Fun Outdoor Games For Kids.

1. **Big Foot Relay.** Have the children bring two shoeboxes with them. Tape the lids onto the boxes, then cut a one-inch-wide and four-inch long slit in each top. Have the contestants slip their feet into the slits in the boxes and race.

2. **Batty Bowling.** Find a number of silly or odd items that can be knocked over by a ball, such as a plastic milk carton, a candlestick, a stand-up doll, a plastic vase of flowers, a pizza box, a tower of empty cans, an umbrella stand, an empty oatmeal container, and a book. Line them up like bowling pins and let the bowlers try to knock them over with volleyballs, tennis balls, or golf balls.

3. **Name-It Ball.** Have players form a circle. Give one player a rubber ball. That player selects a category, such as “candy bars.” He or she then bounces the ball to another player in the circle, who must catch the ball, state an item from the category, such as “Snickers,” and keep the ball moving to the next player. If the player can’t name an item, holds the ball too long, or repeats an item, he or she is out.

4. **Frisbee Tower.** Purchase a bunch of mini Frisbees and place them in a pile in the middle of the yard. Have the guests divide the Frisbees among themselves. The first player begins the activity by placing one of his or her Frisbees on the ground. Each of the following players places his or her Frisbee on top of the first Frisbee, and the action continues until someone causes the growing tower to topple.

5. **Blind Walk.** Create an obstacle path from one end of the yard to the other. Line up the contestants and let them have a good look at the path. One at a time, blindfold the children and have them walk the path without looking. Note each player’s time on the scoreboard.

6. **Cross Step.** Draw a ten-by-ten grid on the sidewalk or patio with chalk. Have each player stand on a different square. One at a time, each player must move to a new square after crossing out the square she or he was formerly standing in. The trick is that players cannot step into a square that is occupied or crossed out. If a player cannot move to a new square, he or she is out. The game continues until one player is left.

7. **Pick Pocket Tag.** Put a strip of cloth in each player’s back pocket. Have the players try to grab each other’s strips without having their own strip taken. The player with the most cloth strips wins the game.

8. **Kill the Cockroach.** Divide the players into two teams. Line them up, one in front of the other and set an odd object in front of the first players in line. They must kick the object across the yard and then across the finish line to win a point for their team. Kick things like a pillow, empty cans, a sock, and so on.

9. **Drag the Body.** Divide the group into two teams. Give each team a blanket. Have one player from each team lie down on the blanket. The teams must drag the body on the blanket from one end of the yard to the other. Whoever crosses the finish line first, wins.

10. **Blind Snakes.** Set up a number of sprinklers in between a starting line and a finish line. Have the kids try to run from one end to the other without getting sprayed. Have one of the kids control the faucet, turning it on and off at random. Award ribbons to the kids who play the longest without getting wet.
Teens are known for staying up late and then dragging out of bed in the morning. Parents sometimes recall the days when their child used to be awake at the crack of dawn, ready to take on the day with excitement, and wonder, “WHAT HAPPENED?”

Circadian Rhythm
Melatonin is a hormone released by the brain that helps maintain the body’s circadian rhythm. The circadian rhythm is similar to an internal clock that plays a vital role in each person’s awake-sleep cycle. While each person has his/her individual sleep needs and cycles, researchers have found patterns. In childhood, circadian rhythms direct most children to fall asleep around 8 or 9 p.m. However, these patterns change during puberty, shifting a release of melatonin later in the evening. This shift can delay the time a teen begins to feel sleepy by two hours or more.

In addition, because the teen doesn’t feel sleepy, he may tend to study, socialize, or engage in hobbies later in the evening. This can disrupt the cycle further.

How Much Sleep Is Needed?
Sleep needs are as individual as persons. However, the American Psychological Association indicates that most teens need about 9 – 10 hours of sleep nightly. Unfortunately, many do not get the proper amount of sleep. According to the National Sleep Foundation, more than 25% of teens report that they sleep only 6.5 hours or less per night.

When a person does not get the required amount of sleep, it creates a “sleep debt”. As the sleep debt increases, it can lead to daytime sleepiness. Each person reacts to daytime sleepiness in various ways, but it can manifest in irritability, lethargy, reduced concentration, and drowsiness while driving. According to the National Highway Traffic Safety Administration, drowsiness and fatigue cause more than 100,000 traffic accidents each year—and young drivers are at the wheel in more than half of these crashes.

Why Is Sleep Important?
Restful sleep is vital to good health and general well-being. During various phases of sleep, the body relaxes muscles, restores its energy, promotes appropriate tissue repair, and promotes a healthy immune system. Helping a teen understand the importance of sleep is one component of helping him maintain a healthy lifestyle.

Helpful Tips for Tired Teens

♦ Prioritize the importance of night-time restful sleep.
♦ Keep a regular sleep/wake schedule.
♦ Avoid an over-filled schedule of activities.
♦ Avoid consumption of caffeine 4-6 hours before bedtime (i.e. cola: energy drinks; chocolate, etc.).
♦ Avoid late-night video games, action movies, or other activities that stimulate excitement or extreme emotion.
♦ Never drive when drowsy.