The Equine Athlete: Basic Conditioning  
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The weather has finally warmed up and it’s time to hit the trail! However, have you stopped to think are you and your horse ready to do so? If you think of your equine partner as an athlete and not just a method of transportation then it may make more sense that your riding partner will need to be in shape before hitting the back country. Performance horses are generally “trained” or conditioned for various events such as reining, roping or racing. Each conditioning program for these events require specific training regimes, nutrition and management programs that enhances the ability of the horse to perform at a top level before reaching fatigue. Even if you only ride your horse during the warm summer months still consider a training and management program that will help keep your horse healthy and in good shape.

When you are considering how to condition your horse- take an approach that will help improve or enhance the horse’s respiratory, cardiovascular systems, and promote appropriate muscle fiber use. It’s important that your horse does not become “winded” or out of breath when riding because this can decrease oxygen in take and trigger a chain reaction that may not be in your horse’s best interest. A properly conditioned horse will also exhibit a lower heart rate or a steady heart rate when exercising and once cooled down the heart rate will quickly drop to resting rates. However, a horse that is stressed and out of shape will have a prolonged increase in heart rate and take longer to return to a resting rate (30-45 bpm). Heart rate can also affect the total red blood cell volume, which can increase or decrease oxygen carrying capacity of the blood. One should also be concerned about what their horse is built to do because this will determine the type of muscle fiber and muscle mass the horse will contain (example comparing the conformation of a thoroughbred to a quarter horse, one horse is made to run a long distance and typically has a longer and leaner muscle pattern where the quarter horse is made to go fast in a shorter distance with a higher muscle capacity). When referring to muscles, there are two main types of muscle fibers slow twitch (Type I) and fast twitch (Type II) involved in physical activity. Depending on the horse’s genetics and exercise regime we can help develop the efficiency of the different types of fibers.

A training programmed focus on slow speed (such as jogging or trotting) for the first few weeks of starting a horse back to work can help promote aerobic capacity (oxygen uptake) and adaptation of the horse’s skeletal system to exercising. Another example of conditioning would include high-speed training where a horse is exercised on certain days at a faster rate of pace. This program is typically used in combination with the slow speed training but alternated from day to day. High-speed conditioning will help promote anaerobic production and Type II muscle fiber development. The Type I fibers are also referred to as slow twitch fibers and are used more for slow or little exercise. The fast twitch fibers are broken into two groups Type IIa, which requires oxygen (aerobic) and IIb does not (anaerobic). A horse being jogged (or trotted) for a long distance or expected to go on a long ride would be expected to have a larger mass of fast twitch Type IIa fibers where a horse expected to exert speed or power quickly would have a larger mass of Type IIb fibers (example a barrel or roping horse). A horse that is not exercised on a regular basis would more and likely contain a higher percentage of Type I fibers. Interestingly, the different fiber types require different sources of energy. The Type IIb fibers which are expected to be formed or conditioned for a race or pulling a heavy wagon would require carbohydrates (sugars and starches) but Type IIa fibers, which are used for long distances could use energy from fat, protein and or carbohydrates. So, nutrient management should be a consideration when conditioning your horse. If you expect your horse to develop and utilize more fast twitch type IIb fibers because you are preparing for a barrel race then it may be best to feed a
diet with more carbohydrates. However, if you are planning to gather cattle and ride quite a few miles each day over rough terrain it may be best to feed your horse a diet higher in fat. Generally, we do not want to solely utilize protein as a major source of energy due to its high costs. Although, providing your horse with high quality forage and supplementing with a concentrate (example: grain or sweet feed) can increase the amount of energy intake your horse will receive from all sources of energy.

Another thing to consider when preparing your horse for competition or riding this summer is monitoring heat loss. Heat is a product of work or essentially the contraction of muscles. It’s released by sweat. So, it’s important to supply your horse with clean water and a source of salt. If your horse becomes dehydrated then fatigue can occur even more quickly. You can prolong fatigue in your horse by proper conditioning, increasing the maximum oxygen uptake, massaging its muscles, supplying clean water on a daily basis and more often when exercising, a source of salt/minerals, and through a good nutrition program designed for your horse and its exercise program. For more information on conditioning your equine for the summer check out this helpful video: http://www.thehorse.com/Video.aspx?n=conditioning-horses&vID=527&src=topic

Talking Points
By Dr. Scott Lake,
Beef Extension Specialist

USDA animal ID proposal criticized
Farmers and ranchers appeal to Vilsack for adequate time to respond

See full article at:
http://deltafarmpress.com/livestock/usda-animal-id-proposal-criticized

Drought accelerating beef cow liquidation
Donald Stotts, Oklahoma State University, Southwest Farm Press

See full article at:
http://deltafarmpress.com/livestock/drought-accelerating-beef-cow-liquidation

Cow Camp Chatter: The ins and outs, good and bad of leasing cows
By Ron Torell Long-Standing Educator and Advocate of Agriculture

See full article at:

Grazing Management -- Quantity is King
From the Aug 29, 2011 Issue of Agri-News

See full article at:
http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw18412
Blackface Ram Test  
By Dr. Robert Stobart,  
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The Animal Science department, in collaboration with the Wyoming Wool Growers and Mountain States Lamb has conducted a summer ram test since 2002. This test was designed for meat breeds of sheep, where growth and lean tissue production are the primary factors. The last several years the test has made use of the GrowSafe System which allows for the collection of daily feed intake of group-fed animals. This provides invaluable information regarding the efficiency by which a ram can convert feed into his overall growth. Increased feed efficiency leads to decreased feed costs to produce the same amount of saleable lean meat. The 2011 test was started the 17th of June and the rams were weighed off the test on the 13th of August, for a 75-day test period. Eight producers tested a total of 70 rams in this year’s test. In addition to ADG, loin eye area and fat depth at the 12th rib (as collected via ultrasound), scrotal circumference, body condition score, pounds of feed per day, pounds of feed per pound of gain, cost of actual gain and an adjusted cost of gain were reported. An index, using Loin Eye Area and Average Daily Gain was then calculated to provide an estimation of an animal’s response on the test.

The overall averages of the group of rams on test were: ADG= .89 lb/d; LEA= 3.4 sq. in.; BF= .2 in; SC= 35.8 cm; BCS (1-5) 3.0; GrowSafe lb. feed/day= 6.2 lb.; lb. feed/lb. gain= 7.2; cost of gain =$1.50/lb; Preliminary Index = 100.

For the 2011 test, the top 35 rams using the Preliminary Index Formula were sorted off and a panel of three recognized and noted sheep experts were asked to visually appraise each of these 35 rams using a scoring scale of 1 (being the least) and 10 (being the best) in conformation, structure and overall quality. These three individual scores were then combined and averaged, and this visual score was then factored into the final index. For 2011, the 3 values were weighted as follows: LEA = 40%; ADG = 40% visual appraisal = 20%. These 35 rams were then ranked from 1-35, and the top 21 were qualified for inclusion into the 2011 WWGA State Ram Sale.

The overall averages for the top 35 were: ADG = 1.02 lb/d; LEA= 3.85 sq. in.; BF= .21; SC = 36.4 cm; BCS= 3.2; GrowSafe lb. feed/day =6.8 lb; lb. feed/lb. gain = 6.7; cost of gain = $1.41/lb. Preliminary Index 100, Final Index 110.7.

There were 20 rams that were entered in the WWGA State Ram Sale held in Douglas the 13th of September. These rams averaged $740 per head, compared to last year’s $583 per head.