

# Kansas Junior Beef Producer Day Educational Materials



Kansas State University  
Youth Livestock Program  
214 Weber Hall  
Manhattan, KS 66506  
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# Contributions

Special thanks to these people for helping us get together this great material.

Animal ID, Inc.

David Kehler

Dr. Dan Moser

Dr. Scott Schaake

Dr. Andrea Sexten

Chelsea Tomascik

Dr. Robert Weber

# Selecting Your Youth Beef Project

Dr. Scott Schaake, Associate Professor  
Department of Animal Sciences and Industry  
Kansas State University

Success in the showring is generally a result of proper selection, excellent management, experience, and a little luck. Beef cattle selection is not an exact science and usually requires some training. It is important to understand the anatomy of both the live animal and carcass and its terminology. A good evaluator of livestock has a keen sense of observation and is able to relate form to function.

Selection of the beef animal should be based on a few general criteria. Regardless the purpose (market vs. breeding), “**structural soundness**” is very important for proper growth, reproductive performance, and animal longevity. Animals that demonstrate structural defects will have impaired mobility, pain, and unsoundness that can lead to decreased performance. Structural problems can be caused by either genetic or environmental factors. To fully understand structural correctness, one should be familiar with the skeleton of animals and the correct angulation to the joints.

Skeletal correctness is best evaluated from the ground up. Proper foot and hoof development is necessary and serves as a foundation to the skeleton. The pasterns of livestock serve as one of the shock absorbing mechanisms to both the front and rear limbs. The ideal slope to the pastern should fall around 45° - 47°. As the pastern becomes straighter (approaching 90°) it has less of a cushioning effect when the hoof hits the ground. The ideal front limb should have a long, sloping shoulder. The angle to the scapula should be approximately 45° to the ground, which is similar to the correct angle through the pastern. As the scapula becomes more vertical (approaches 90°) the length of step out of the front end is shortened. In most cases, straight pasterns and straight shoulders go hand in hand.

Structural soundness of the hind limb is critical to the function of breeding animals, especially the males. The length of step associated with the hind leg is dependent upon the angle of the femur bone, hock joint, and pastern. The simplest way to evaluate the structure of the hind leg is to drop a line from the pin bone down through the cap of the hock to the ground. This line should be perpendicular to the ground and a correctly structured hind leg will be parallel to that line. Common defects of the hind limb include a post-legged condition (too straight) or sickle hocked (too much set).

Most cattle breeders in the United States prefer a straight, level top line. The hip should be long and nearly level from hooks to pins, with a wide pin placement. Keep in mind some breeds of cattle (i.e. Brahman influenced) naturally have a sloping rump. This may not be considered “ideal” but rather a breed characteristic.

A second selection criteria includes “**body capacity**” and is typically evaluated with a three dimensional view. These dimensions include the depth of rib, spring of rib, and length of rib cage or length of body. Body capacity is important to both market cattle and breeding animals alike and generally indicates the animal’s ability to convert feedstuffs to fleshing ability.

All meat animals, regardless of the classification (market vs. breeding) should display some degree of “**muscling**”. Of course, more emphasis will be placed on muscling in market animal classes. The best indication of muscling should be evaluated through the hind quarter from a rear view. A muscular shaped beef animal should have a thick, square rump with a wide pin bone placement. Muscle thickness should be maintained through the center and lower parts of the rear quarter, requiring some shape or bulge to it. The next best indication of muscling can be seen along the animal topline. Be cautious and do not confuse fat with muscle. A heavy muscled animal will be thick just behind the shoulder (back) and demonstrate a full, muscular shaped loin. A light muscled animal will be narrow topped, in particular they will be pinched just behind the shoulder.

Traits associated with “**sex character**” (femininity and masculinity) are also important to consider when selecting a breeding animal. A heifer regarded as feminine will have a fairly long, refined head, a neck that is long, lean, and free of excess waste and a flat smoothly blended shoulder. The bone work should be flat, and clean joints that are free of swelling. Of course, some body condition (fat) is acceptable, but heifers that are too fat are considered unfeminine and nonproductive in their appearance. Bulls should be masculine and this includes a stouter appearance and large testicle size. The minimum scrotal circumference for most breeds of cattle at one year of age is 32 cm.

Today “**frame size**” is the least important trait to consider. The term frame size includes both length and height, of which length is the most important. It is important for an animal’s mature frame size and weight fit the environmental they will be placed in. In other words, as mature size increases, so does the nutrient requirements for maintenance.

It is important to keep the general picture of form and function in mind when selecting your next show animal. Never become single trait minded and be cautious when selecting for extremes. The animal with the best combination of structural correctness, body volume, sex character, muscling, and correct frame size should prove to be the winning kind.

# Facilities and General Care for Junior Beef Projects

Dr. Dan Moser, Associate Professor  
Department of Animal Sciences and Industry  
Kansas State University

While the highlights of most junior beef projects are in the show ring, to quote a young exhibitor and friend of mine, “Winning begins at home.” Whether your goal is to show a champion at the state fair, or to simply have a positive experience at the county fair, the daily care of your animals is essential to achieving that goal. Appropriate facilities and good management of your animals lead to a positive outcome in the project.

Facilities for youth beef projects need not be fancy, but they do need to be functional. Rarely is there a chance to build a new facility from scratch, and most existing barns and pens can be adapted to provide adequate housing for show steers or heifers, perhaps with some simple modifications. For many families, time is a very scarce resource. Good facilities help maximize the benefit you gain from the time spent with your animals, and can maintain and increase the interest young people have in their projects.

Several factors impact your needs for facilities. Obviously, the number of animals in your project is an important factor. As you develop your facilities, planning for future expansion can save money in the long run. Heifer projects build a cow herd, so heifer exhibitors need to plan for breeding and calving. Your show season is also important. Many exhibitors in Kansas show from April to September, when the weather is reasonably temperate. For those exhibitors, having warm enclosed places to wash, dry and clip your cattle is not as important as those who plan to show in December, January and February. Finally, the level at which you plan to compete, whether local, regional, state or national, and the resources you wish to devote to the project are a consideration. Many exhibitors start locally but later show at the state level or higher. To compete at higher levels, you need better facilities as well as better cattle.

Cattle have fairly simple needs. They need shelter from extreme cold and extreme heat, and will grow and gain better in favorable temperatures. They need access to clean, fresh water at least twice a day, and more often during extreme heat. They need exercise for their own health and to maintain structural soundness, and they will benefit from social interaction with other cattle. They do best in a consistent environment, and dramatic changes and other stresses can have adverse effects.

Most show cattle facilities consist of holding pens within a barn, and a turnout area. Small pens allow calves to be easily caught and haltered, and to be fed individually. Pen sizes are typically 10' by 10' up to 16' by 16'. If halter breaking will be done in the pens, ties should be built from sturdy materials and well-anchored to the ground or the barn. For safety, pens should allow people to climb out of them if animals become aggressive. In winter, bedding such as straw may be provided, especially in open barns. In summer, pens may be bedded with wood chips or shavings, sand, or just dirt. Concrete floors should

be avoided, as cattle tend to slip, and can become lame or injured. Pens should be kept clean and dry, free of excessive manure or mud.

If pens are adjacent to the turnout area, the gate between the pen and holding area can be left open to give the cattle the choice of location when appropriate. On hot days, show cattle are usually kept in pens under industrial fans to allow hair retention and growth. Foggers and misters may be used to help keep cattle cool on hot days, especially where humidity is low, but bedding such as wood chips or sand is needed to absorb moisture.

The turnout area can be a dirt lot or a small grass pasture. Some show cattle are turned out in long narrow grass lots that are 75 yards long or longer. These long lots, often divided with electric fence, maximize the amount of exercise the cattle get as they walk from one end to the other. Cattle also socially interact with those across the fence. To encourage exercise, cattle can be fed hay or provided salt blocks at the far end of the pen. When building a turnout area, availability of shade and windbreaks may also be considered in the design and location. Ideally, the turnout is close to the pens for convenience, and is located so that cattle can be easily observed.

Show cattle need a place where they can be washed or rinsed. Some method of restraint, such as a working chute or alleyway will also be needed for vaccinations, artificial insemination of heifers, etc. A portable blocking chute is often not sufficient restraint for painful procedures like vaccination. Fans and blowers require significant amounts of electricity, often beyond what a typical barn built for other uses would have. Storage of feed bags and/or bulk feed, hay and show equipment will be needed either in the barn or nearby. Adequate lighting is necessary for observing animals in early mornings and late evenings. Early observation of problems allows for early treatment, so good lighting is essential, especially in the short days of the winter months. Manure management and fly control are also important considerations.

One of the keys to any livestock project is frequent observation of the animals. Abnormal behavior is often the first sign of a problem. Take the time to observe each animal eating at every feeding. Loss of appetite can indicate illness or other issues. Watch each animal walk every day, and learn their routine behaviors. Early identification of sickness or injury, along with early intervention, maximizes the chance of a good outcome.

When your calves first arrive, minimizing stress is important to avoid illness. If possible, obtain a small amount of the ration the calves were on, and start them with that, along with plenty of hay. Gradually change the ration to the one you will feed. Don't start halter breaking or other handling until the cattle are adapted to their new environment.

In terms of management, it's never a good idea to feed one calf alone. Cattle need social interaction with other cattle, and will often become nervous alone, and may lose appetite. Some juniors will purchase one top quality calf, and then buy or raise a less expensive "buddy" to feed along with the

other calf. It's best if the "buddy" goes along to the shows, as familiar animals will help minimize the stress of unfamiliar surroundings.

The most important aspect of general care is consistency. Changes to a calf's management, feeding, housing, care or environment cause stress, which can lead to loss of appetite, sickness and behavior problems. While other speakers will cover nutrition in depth, it is important to feed cattle a consistent ration at a consistent time each day. Show cattle need to be fed at least twice a day, with as close to equal time periods between feedings as possible. Develop a relationship with a feed supplier that you can count on to provide high quality, consistent products when you need them. Most show cattle will need to be fed individually. Otherwise, the more aggressive animals will consume too much feed and become overconditioned, while the timid eaters will not get enough feed. Changes to ration contents or amounts should be made gradually over several days.

Successful halter breaking starts early. The younger and smaller the calf at halter breaking, the easier the process is for both the calf and the people involved. While halter breaking techniques vary, the best approach is always to minimize stress, and gradually increase the degree of human interaction. Positive reinforcement goes a long way in developing trust of the calf. Safety of the calf and the people involved should always be the first priority. Never leave calves tied up during halter breaking when no one is there to watch them.

It's important to develop a relationship with a good veterinarian. Show cattle are "high-risk" in terms of potential for sickness, due to the additional stress of hauling and the exposure to numerous animals that may carry infectious agents. An aggressive vaccination program should be followed, and cattle need time after vaccination to develop immunity.

There are many strategies for encouraging hair growth in show cattle. Genetics, and to some extent, nutrition play a role. Hair growth can be encouraged by keeping cattle cool during the hot parts of the day in the summer, and by daily rinsing and vigorous brushing, using either a rice root brush or a plastic massage brush. The stimulation of the skin with brushing is likely as important as the cooling effect of rinsing. However, frequent washing with soaps and shampoos can dry the hair and skin.

Most show cattle will benefit from occasional hoof trimming. Trimming hooves on cattle requires specialized equipment and training, and is usually best left to professionals. Frequency of hoof trimming depends on the animal, the environment they are raised in, and the need to correct minor structural defects.

Regardless of the amount of contact the cattle have had at home, going to their first show is usually uncomfortable for the animal. New sights and sounds, and exposure to other cattle may be stressful. Anticipate that cattle may not behave as well at their first show as they did at home. Often cattle do not eat or drink well the first 24-48 hours at their first show, especially if they are changing from

well water to city water. One of the benefits of participating at prospect shows early in the show season is to get the cattle acclimated to a show environment, where they will eat, drink and lie down frequently later on, and be more cooperative in the show ring. Cattle usually acclimate and perform better at their second show than at their first.

Perhaps the biggest key to success in the project is building relationships with those that can provide advice and support. Fellow exhibitors are usually more than willing to help those that are new to the project, and cattle breeders and extension staff can provide information and guidance. If you are planning to build facilities, take the time to visit other farms to get ideas. Ask lots of questions, and you'll be well on your way to a successful project.

# Selecting Your Next Replacement Heifer to be a Great Cow

Dr. Bob Weaber, Cow/Calf Extension Specialist and Assistant Professor  
Department of Animal Sciences and Industry  
Kansas State University

For many junior livestock participants, the purchase of a breeding heifer is a significant investment in the future. Breeding projects are meant to server a number of goals. First, they enable the junior livestock exhibitor to learn more about the commercial and seedstock sectors of the beef industry. Second, these projects foster the development of beef cattle husbandry skills including feeding, nutrition, genetics, reproductive physiology and visual appraisal. Third, the heifers are typically selected for conformational attributes viewed to be desirable in the show ring. Fourth, the heifers are retained as breeding females to build a cow herd that will help finance many youth's college education. It's easy for the visual appraisal component to dominate the selection decision when evaluating a group of heifer calves for purchase. However, if your goal includes keeping that heifer as a breeding female to produce seedstock or other heifer or steers suitable for future projects, some care should be taken to evaluate the genetic merit for a number of economically important traits. The tools you should use to judge the genetic merit of a selection candidate are Expected Progeny Differences (EPD).

## What are EPDs?

EPDs are estimates or predictions of the difference in performance that are expected to be observed between the average performance of sire progeny groups for a given trait when given an equal opportunity to perform. EPDs are relative measures of genetic merit and allow the effective comparison of animals across herds. EPDs are the most effective selection tool available. Research suggest that EPD are 7 to 9 times more effective as predictors of genetic merit than an animal's actual or adjust performance record or within contemporary group ratio.

While EPDs are not the only selection information you should consider, EPDs are the most effective tools available to describe the genetic differences between animals within and across herds. EPDs are much more effective genetic predictors than actual or adjusted performance records. If an EPD is available for a trait it should be used instead of an animal's own performance record for that trait. The EPD removes age and environmental effects that can bias a decision based on actual or adjusted performance records. Use Calving Ease (CE or CED) EPD, rather than birth weight (BW) EPD, if it's available to select bulls that minimize calving difficulty. CE EPD calculations include BW data and other sources of information that affect dystocia.

Not all EPDs are the same, so make sure you know the appropriate information for the breed of cattle you are purchasing. For a useful reference on EPDs and other genetic topics see the Beef Sire Selection Manual (<http://www.nbcec.org/producers/sire.html>) Obtain the breed average EPDs and a percentile rank table available from the most current genetic evaluation for the breed of interest.

Percentile rank tables can be found on most breed association websites. These tools will enable you to compare the relative genetic merit of individual animals to other animals in the breed.

Finally, not all EPDs should be used for selection of replacement or breeding females. Some traits like marbling score, carcass weight, or terminally oriented selection indexes focus on progeny performance for marketing endpoints. These traits are not economically relevant to a replacement selection decision. Traits that affect a cow's ability to conceive a calf, give birth to the calf with no dystocia, rear that calf to weaning and do it year after year are the traits of importance. A list of suggested traits to consider when purchasing a heifer is listed below. Setting criteria for lots of traits rather than just a few important ones dilutes your selection intensity and often clouds your decision making ability.

### **Trait Definitions for EPD to Consider in Heifer Selection**

(Adapted from Cowley, 1998; <http://simmental.org/site/index.php/genetic-evaluation/epds>)

**Calving Ease Direct** - Predict the average difference in ease with which a sire's calves will be born when bred to first-calf heifers. Expressed as percentage of unassisted births with a higher value indicating greater calving ease.

**Calving Ease Maternal** - Predict the average ease with which a sire's daughters will calve as first-calf heifers when compared to the daughters of another sire in the same evaluation. Expressed as percentage of unassisted births.

**Weaning Weight** - Weaning Weight EPDs are expressed in pounds and predict the average differences in weight that can be expected between the progeny of animals in the same genetic evaluation at 205 days of age. Weaning Weight EPDs do not account for differences in weaning weight that are due to milk.

**Yearling Weight** - Like Birth and Weaning Weight EPDs, Yearling Weight EPDs are expressed in pounds and predict the average differences that can be expected between the progeny of animals at one year of age.

**Milk** - Milk EPDs are expressed as pounds of calf weaned by a bull's daughters. They reflect the average differences in weaning weight that can be expected in grandprogeny due to the milking ability of a bull's daughters. Available feed resources will dictate the extent to which milking ability should be selected.

**Total Maternal (Maternal Weaning Weight)** - Like Milk EPD, Total Maternal EPDs are also measured in pounds of calf weaned by an animal's daughters. They account for average differences that can be expected from both weaning weight direct as well as from milk, and measure a sire's ability to transmit milk production and growth rate through his daughters. They are calculated by adding an animal's Milk EPD to one-half of its Weaning Weight EPD.

**Heifer Pregnancy** – Predict the additional percentage of heifer progeny that conceived a calf during a specified breeding season.

**Docility** - Predict the percentage of an animal's offspring that are expected to score favorably (1 or 2) on a five-point scoring system when compared to the offspring of another animal. Expressed as a percentage with higher values being favorable

**Stayability** - Expressed as the probability that an animal's daughters will remain in production to at least six years of age when compared to the daughters of another animal. A measure of sustained fertility that probably reflects traits such as fleshing ability and structural soundness. Expressed as deviations from a 50% probability, a higher value indicates increased stayability

**Percentile Rank Table**

<b>Spring 2012 American Angus Association Percentile Breakdown Non-Parent Cows</b>						
	<b>Production</b>				<b>Maternal</b>	
<b>Top Pct</b>	<b>CED</b>	<b>WW</b>	<b>YW</b>	<b>Doc</b>	<b>CEM</b>	<b>Milk</b>
1%	14	65	114	30	13	35
2%	13	63	111	28	13	33
3%	12	62	109	26	12	32
4%	12	61	108	25	12	31
5%	11	60	106	24	12	31
10%	10	57	102	21	11	29
15%	9	56	99	19	10	27
20%	9	54	97	18	10	26
25%	8	53	94	16	9	26
30%	7	52	93	15	9	25
35%	7	50	91	14	9	24
40%	6	49	89	13	8	24
45%	6	48	87	12	8	23
50%	6	47	86	11	8	22
55%	5	46	84	10	7	22
60%	5	45	82	9	7	21
65%	4	44	80	7	7	20
70%	3	43	78	6	6	20
75%	3	41	76	5	6	19
80%	2	40	73	3	5	18
85%	1	38	70	1	5	17
90%	0	35	66	-2	4	16
95%	-2	31	59	-6	3	14
Total Animals	112,369	118,211	118,211	9,753	112,369	118,211
<b>Avg</b>	<b>5</b>	<b>47</b>	<b>85</b>	<b>10</b>	<b>8</b>	<b>22</b>

# Nutrition

Dr. Andrea Sexten, Assistant Professor  
Department of Animal Sciences and Industry  
Kansas State University

## BEEF NUTRITION

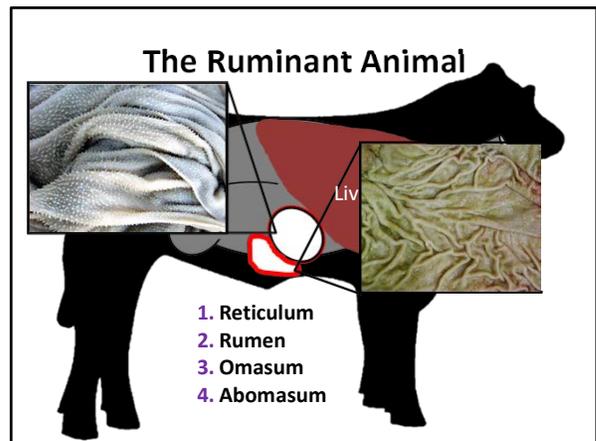
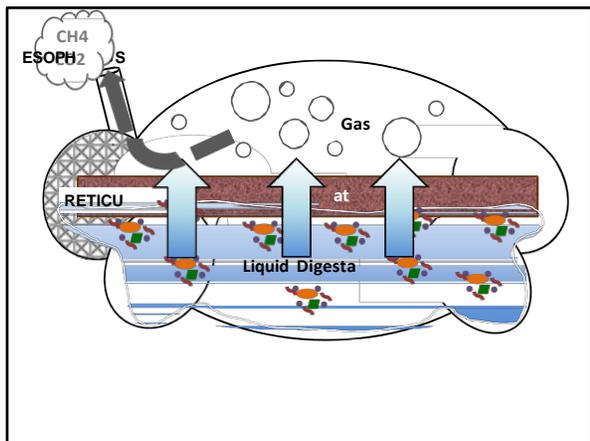
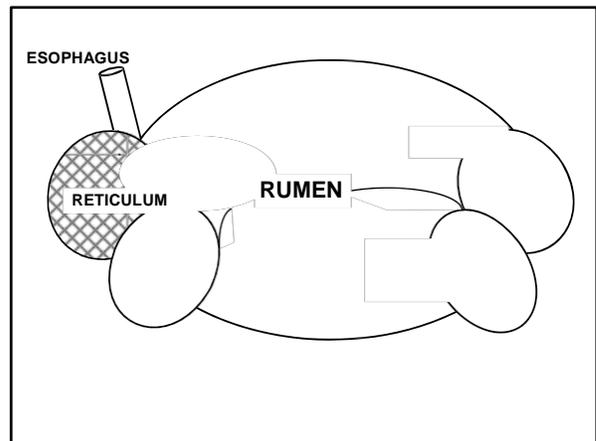
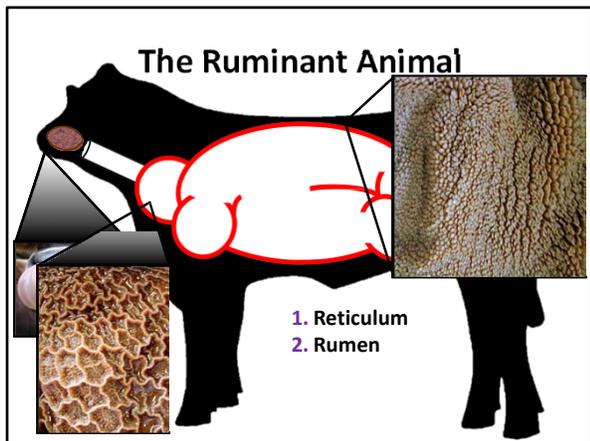
Kansas Junior Beef Producer Day  
January 7, 2012

Dr. Andrea Sexten



### Introduction

- All animals have nutrient requirements for:
  - Maintenance
  - Reproduction
  - A specific level of growth
  - A specific level of work
- Feed is made up of nutrients that an animal needs.
- An animal's nutrient requirements are met when an animal eats enough of the correct feeds.



## To properly feed an animal you need to know...

1. Needs of the animal
2. What to feed
3. How much to feed

## Needs of the animal

6 classes of nutrients:

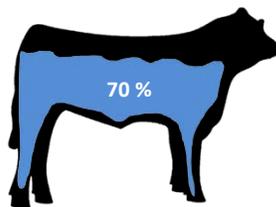
1. Water
2. Carbohydrates
3. Proteins
4. Lipids (Fats and Oils)
5. Minerals
6. Vitamins

## Needs of the animal

### Water

- Needed in the largest amount
- Animal's body is more than 70% water

**Always provide plenty of fresh and clean water!**



## Needs of the animal

### Carbohydrates

- Most important **ENERGY** source for your animal
- Will make up over 80% of your animal's diet
- Will come from roughages (hay) and concentrates (cereal grains)

## What to feed

- Roughage
  - High in fiber (> 18%)
  - Lower in energy
- Concentrate
  - Energy
    - Low in fiber (< 18%)
    - High in energy
    - Less than 20% crude protein
  - Protein
    - More than 20% crude protein



## What to feed - Energy

- Roughages
  - Provide "scratch factor" for rumen health
  - Generates saliva
  - Can help reduce bloat
  - Ex: Pasture, hay, and silage

### What to feed – Energy Concentrates

- Corn
  - Most common feed grain in the US
  - Highest energy value
  - Low fiber
  - Low protein
  - Less than 20% roughage, corn can be fed whole
  - More than 20% roughage, corn should be processed to increase digestibility
  - Prone to mycotoxin contamination if stored too wet



### What to feed – Energy Concentrates

- Milo
  - More common in southern US
  - Slightly lower in energy
  - Higher in protein
  - Should be processed prior to feeding (rolled, cracked, etc.)
  - May contain moderate amounts of tannins
    - Reduces palatability
    - Reduces protein digestion



### What to feed – Energy Concentrates

- Oats
  - Fewer problems with digestive upset
  - Higher in fiber
  - Lower in energy
  - Higher in protein than most other grains
  - Good for starting young animals on feed
  - Can be used to maintain animals



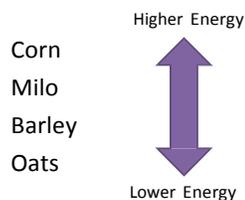
### What to feed – Energy Concentrates

- Barley
  - More common in the northern US
  - Lower energy
  - Higher fiber
- Beet Pulp
  - Very palatable and digestible
  - 85% the energy of corn
  - Higher fiber



### What to feed – Energy Concentrates

- Relative feed value in a complete diet



### Needs of the animal

#### Proteins

- Needed for growth and development of **MUSCLE**
- Your animal will need 12-15% crude protein in its daily diet



## What to feed - Protein

- Soybean meal
  - Most common protein source in US
  - Similar energy to corn
  - High in protein (44-48%)
  - Balances nutritional shortcomings of corn
- Cottonseed meal
  - More common in the southern US
  - Lower energy than corn
  - High in protein

## Needs of the animal

### Lipids

- Includes fats (solids) and oils (liquids)
- Source of **Energy**
- Too much (> 6% of the diet) can cause animal to stop eating
- Can help improve sheen of haircoat

## Needs of the animal

### Minerals

- Required for growth of animals
- Sodium chloride (salt), calcium, and phosphorus are the most important for a growing beef animal

### Vitamins

- May be needed: A, D, E, and K

## Feed Additives

- Antibiotics
  - Medicine fed at low levels to reduce sickness and improve performance
- Ionophores
  - Can improve feed efficiency by 5-10%
  - Ex: Rumensin (monensin) & Bovatec (lasalocid)
- Beta agonists
  - Promote lean grow
  - Ex: Optaflexx (ractopamine) & Zilmax (zilpaterol hydrochloride)

## Reading feed tags

- Product name and purpose
- Drug claim and active ingredient
- Guaranteed nutrient analysis
- Ingredient list
- Feeding directions
- Precautionary statement
- Name and address of manufacturer

MEDICATED	
A Supplement for Beef Cattle Fed in Confinement for Slaughter For improved feed efficiency in cattle being fed in confinement for slaughter.	
Minimum	600 units
ACTIVE DRUG INGREDIENT	
Monensin	
GUARANTEED ANALYSIS	
Crude Protein, Min.	60.0%
This includes not more than 42% equivalent crude protein from nonprotein nitrogen.	
Crude Fat, Min.	0.0%
Crude Fiber, Max.	0.0%
Calcium (Ca), Min.	10.2% Max.
Phosphorus (P), Min.	0.85% Max.
Salt (NaCl), Min.	2.5% Max.
Potassium (K), Min.	1.7%
Vitamin A, Min.	50,000 IU per pound
INGREDIENTS	
Dehulled Soybean Meal, Calcium Carbonate, Urea, Cottonseed Meal, Salt, Monocalcium Phosphate, Dicalcium Phosphate, Calcium Sulfate, Corn Gluten Feed, Potassium Chloride, Vegetable Oil Refinery Lipid, BHT (A Preservative), Magnesium Oxide, Kainin - Tar (Anti-Caking Agents), Zinc Oxide, Manganese Oxide, Copper Sulfate, Dicalcium Phosphate, Linseed Meal, Ferrous Sulfate, Vitamin E Supplement, Mineral Oil, Thiamine Mononitrate, Vitamin A Supplement, Potassium Sulfate, Potassium Iodide.	
FEEDING DIRECTIONS	
Feed 1 lb per head per day by thoroughly mixing with a minimum of 15 lb of grain-roughage mixture to provide 250 mg monensin per day. Or blend 120 lb of this product with 1800 lb of grain and/or roughage to produce a ration with 50 grams per ton monensin. Feed 3.3 to 24 lb of this blended ration to provide 50 to 300 mg of monensin per head per day. Feed continuously. During the first 5 days, cattle should receive no more than 100 mg per day. Provide clean, fresh water at all times.	
Caution: This product is a potent emetic when administered to horses in copper toxicity. Do not allow horses or other equines access to formulations containing monensin. Ingestion of monensin by equines has been fatal. Monensin medicated cattle feed is safe for use in cattle only. Consumption by unapproved species may result in toxic reactions.	

## To properly feed an animal you need to know...

1. Needs of the animal ✓
2. What to feed ✓
3. How much to feed

### How much to feed

- 2 feeding phases:
  - Growing Phase
  - Finishing Phase

### How much to feed

- Growing phase
  - Want calf to grow not fatten
  - Usually feed a lower energy diet
  - Typical gains between 1.5 to 2.5 lbs. per day
  - More roughages (50-100% of diet)
  - Limited concentrates

### How much to feed

- Growing Steer:
  - Limit concentrate to 1-1.5% of body weight
  - Full feed roughage
- Growing Heifer:
  - Limit concentrate to 0.5-1% of body weight
  - Full feed roughage

### How much to feed

- Finishing Phase
  - Promote fattening
  - Usually feed a higher energy diet
  - Higher gains in excess of 2.5 lbs. per day
  - Limited in roughage (20% or less of diet)
  - More concentrates

### How much to feed

- Finishing Calf:
  - Full feed concentrate 2-2.5% of body weight
  - Limit feed roughage at 3-5 lbs. per day

### How much to feed

- Weigh your animal to track progress
- To slow gain reduce quantity of concentrate or change the amount of energy by using a different grain
- If a ration is working then continue feeding it!

## To properly feed an animal you need to know...

1. Needs of the animal ✓
2. What to feed ✓
3. How much to feed ✓

## General guidelines...

- Minimize stress during transition
- Start with palatable good quality hay
- Introduce grain **slowly** – no more than 1% body wt.
- Increase grain **gradually** over a week or 2
- Reduce roughage **gradually** – no less than 3-5 lbs. per day to maintain good rumen health

## General guidelines...

- Feed regularly – 2 to 3 times per day
- Keep feed bunks clean
- Store feed in cool dry area
- Observe animal regularly
- Always have fresh and clean water available
- Talk to you neighbors

## Thank you!

**Dr. Andrea Sexten** Kansas  
State University Dept. Animal  
Sciences & Industry  
127 Call Hall  
785-532-1450  
aksexten@ksu.edu

## Nutrients in the feed

- 2 main categories of feed
  - Concentrate
    - Energy
      - Low in crude protein (< 20%) and fiber (< 18% )
    - Protein
      - More than 20% crude protein
  - Roughage
    - High in fiber (> 18%)
    - Lower in energy

## Nutrients in the feed

- Concentrate Feeds
  - Corn
  - Milo
  - Wheat
  - Barley
  - Oats
- Beet Pulp
- Soybean meal
- Cottonseed meal

## Nutrients in the feed

- Roughages
- Legumes
- Grasses
- Silages
- Pasture

## To properly feed an animal you need to know...

1. Needs of the animal
2. What to feed
3. How much to feed



# Beef Cattle Showmanship

Beef cattle, like other species require handling and training that starts at home. In order for you to have an animal that works properly in the show ring, you must put in many hours of hard work in order to maximize your animal's strong points and minimize the weaker points. Halter breaking, feeding, washing, clipping, and practicing showing are all things that should be completed at home, prior to going to any show.

A good showman is clean and well presented, aware of the judge and your surroundings, courteous at all times, pays attention, and knows how to properly set up your animal to show it's best physical attributes.

## Showman's Attire

A showman should be neat and clean just as your animal should be well groomed. It is recommended that you wear appropriate clothing consisting of a tucked-in collared shirt, leather boots, jeans and a belt. Fancy and flashy clothing are not needed to look professional and can cause a distraction. A baseball cap has no place in the show ring.

In addition to being properly dressed, you should have the necessary equipment. A comb in your back pocket with the teeth turned to the inside as well as a show stick and show halter are necessary.

## Show Time

- Check the show schedule and be ready when your class is called
- Lead the calf from the left side
- Your show stick should be in your left hand
- Don't coil the lead strap up around your hand or let drag
- Be aware of the judge and ring stewards
- Use the entire space provided
- Do not crowd other livestock

## Setting Up Your Animal:

Always allow space between your calf and the calf next to you. Generally, you will set your animal up in a rear profile position after you walk into the ring. In order to set up in rear profile correctly, all feet should be set at all four corners under the animal. You will then lead your animal around the ring so the judge can view structural correctness and the side profile of your animal. A correct side profile position consists of the front feet set even while the back feet are staggered with the judge's side back foot being further back. Remember to stay calm while setting up and scratching your animal. Quick, rough movements show nervousness on your part and can make your animal uneasy.

Good sportsmanship is an important part of showmanship. Remember that you are always being watched and often judged by your actions. Work hard, practice before the show, always try to do better next time, gain from your mistakes and above all, always have fun!

# How to Nose Print Cattle

Legible nose prints should be similar to a human fingerprint, with clear lines, dots and definition.

The following procedure is suggested:

1. Clean and dry the nose with a terry towel.
2. Ink the nose by "patting" the nose with a "felt" ink pad that has had a light to moderate application of black ink. Using a foam pad, pressing too hard, and/or having too much ink on the pad will result in prints with little or no definition. Use blank ink only.
3. A clip board, wood or cardboard backing will help steady the card. After inking immediately place the card at the upper lip and roll toward the animals face. Movement of the nose and/or pressing the hand will result in poor prints. From the time the nose is cleaned, the printer has about 5 seconds to get a print before the nose moistens.

If the print is smeared, take it again. Start over completely by cleaning the nose. If the print is light, try pressing harder or add a small amount of ink to the pad. Be sure to get the complete cattle nose print from the top of the nostril through the calf's upper lip.

*Information adapted from Dave Kehler, Director/Agriculture Agent, Butler County.*

## What are we looking for?

- A print where the nose is dry
- No smudges or blurs
- Lots of individual dots, just like a fingerprint
- Best time to print – in the morning, when the air is cool and dry
- Don't chase your animal – it will become hot and sweaty



Examples of legible nose prints



**CATTLE HAIR SAMPLE COLLECTION INSTRUCTIONS**



**1** Check the ear tag number of the animal, and record it on the hair sample envelope. We strongly recommend that you collect tail switch hair. If this is not an option, then collect hair from the poll, neck or tail head. Clean the sample area with a paper towel to remove excess dirt if necessary.

Use bent nose, long nose or needle nose pliers to collect the sample.



**2** Grasp the hair close to the skin with pliers and pull directly away from the skin. Take at least two pulls. Make sure that the sample has at least 40 hair roots. If tail switch is not available, then take at least 5 pulls from the poll, neck or tail head.



**3** Inspect the hair sample to ensure at least 40 hair follicles.

Do NOT cut the hair from the animal. The hair MUST CONTAIN ROOTS for DNA testing. Avoid touching the roots and make sure the hair

is dry.

Place hairs in the sample envelope and seal the envelope. Do not put hairs in a plastic bag.



**4** Fill out the remaining information lines on the envelope, and have the witnesses sign.

**REMEMBER:** Cleanse hands and pliers between animal samples to ensure that hairs from different animals are not mixed.



**CATTLE HAIR SAMPLE CHECKLIST**

- ✓ Record ear tag number on the envelope
- ✓ Collect hair from tail switch
- ✓ Obtain at least 40 hairs with follicles
- ✓ Take at least 2 pulls
- ✓ Inspect for follicles—do NOT touch follicles
- ✓ Obtain exhibitor signature & seal envelope
- ✓ Clean pliers and hands between animals