- Slide 1: The process of grading feeder cattle is a projection of maturity based on the frame size of the calf, the degree of muscling, and the sex of the calf. While grading feeder cattle can seem to be a daunting task, with a few basic skills you can become quite proficient. This presentation will walk you through the phenotypic characteristics that need to be evaluated when grading feeder cattle.
- Slide 2: Frame size will have a big impact on an animal's growth curve and the time it will take the animal to reach maturity. For example, a large framed, heavily muscled steer will have an extended growth curve and will not deposit the desired 0.4 inch backfat until approximately 1400 pounds. On the other hand, a small framed, lighter muscled heifer will achieve 0.4 inch backfat at about 900 pounds. As you can see, the frame size and amount of muscling a calf possesses will dictate whether the growth curve is extended or shortened. The sex of the animal also has an influence on maturity. If frame size and muscling are equal, heifers will mature, or finish, quicker than steers.
- **Slide 3:** Frame size is determined by evaluating the length and height of the calf. Length is best determined by visually measuring the distance from the fore flank to the rear flank. Height should be evaluated from the calf's chest to the ground and from the calf's hip to the ground.
- Slide 4: There are three (3) frame sizes for cattle: "large", "medium", and "small". The final weight that will be required for a calf to finish, or achieve 0.4 inch backfat, varies with frame size and sex of the calf. Let's first consider steers. Large framed steers will finish over 1250 pounds, medium framed steers will finish between 1100 and 1250 pounds, and small framed steers will finish below 1100 pounds. Heifers, on the other hand, will typically mature, or finish, about 100 pounds lighter than steers. Heifers that are large framed will finish over 1150 pounds, medium framed heifers will finish from 1000 to 1150 pounds, and small framed heifers will finish before reaching 1000 pounds.
- Slide 5: When evaluating the degree of muscling, it is best to view the calf from the rear starting at the ground level and working upwards. Heavily muscled calves will be as wide between their feet when either standing or walking as they are through their top, and the top will often be grooved. The center of the quarter, or stifle, will be wider than either the calf's top or the width between its feet on really muscular cattle. A rectangle shape when cattle are viewed from behind is a good indication of thick muscling. As calves get lighter muscled the width between the feet will narrow down to a point of nearly standing with their legs crossed. Light muscled cattle will also have a sharp, roof-shaped top, and will be fairly narrow through the stifle portion of the quarter. When viewed from behind, light muscled cattle will exhibit a triangular shape.

- Slide 6: There are four (4) muscle grades in cattle: #1, #2, #3, and #4. A #1 muscle grade denotes cattle that are very thick and heavy muscled. Cattle receiving a #2 muscle grade have a flatter muscle shape and are average muscled. A #3 muscle grade signifies cattle that are thin and light muscled. A #4 muscle grade is very rare and denotes cattle that are extremely light muscled, such as a starved out Jersey calf.
- Slide 7: The calves in this slide illustrate the spread which exists in the #1 muscle grade. The Charolais steer on the left is very heavily muscled and is an example of the highest #1 muscle grade. The black calf on the right is near the bottom of the #1 muscle grade. This calf shows some stifle expression and is wide at the ground, but is not as thick and extreme in its muscling as the white calf.
- Slide 8: The spread in the #2 muscle grade is not as wide as that for the #1 muscle grade. Calves that fit into this grade still have some width at the ground, although less than the width that was seen in the #1 muscle grade calves. Also, the muscle in #2 cattle appears flatter without the bulge in the stifle area of the quarter that was seen in the #1 muscle grade calves. Many of the cattle graded through out the U.S. fall into the #2 muscle grade.
- **Slide 9:** Cattle with a #3 muscle grade are narrow at their feet, thin through their quarter, and the undesirable triangular look becomes very apparent. Dairy cattle and dairy crosses are typically labeled as #3 muscle grades.
- **Slide 10:** A #4 muscle grade is fairly rare. This grade would be used for calves that are in thin condition and have almost no muscle thickness through their quarter or over their top. These calves will usually cross their feet when they walk.
- **Slide 11:** The 4 muscle grades are depicted in this slide. When viewed from the rear, the rectangular shape of the #1 muscle grade progressing to the sharp triangular shape of the #4 muscle grade is quite evident.
- Slide 12: There are 13 possible grades of feeder cattle. The first 12 grades include Large Frame #1, #2, #3, or #4, Medium Frame #1, #2, #3, or #4, and Small Frame #1, #2, #3, or #4. The final feeder cattle grade is "Inferior", and would include sick, unthrifty calves or calves that are double-muscled due to their inability to marble or quality grade.
- Slide 13: When grading feeder cattle, age can be a basis for adjusting the grade of a feeder calf. Cattle with long tails and old, wide heads relative to their weight are usually lowered one frame size. This discount, or downward adjustment, is made based on the fact that the older the calf, the closer it is to maturity, regardless of its weight.

- **Slide 14:** Excess fat, or condition, is an indication that a calf is nearing the completion of its growth curve and reaching maturity. For this reason, feeder calves with excess fat are typically lowered one frame size. For example, if an excessively fat feeder calf was initially given a frame score of medium, it would be lowered to a frame score of Small +. Muscle should also be re-evaluated to ensure a calf's thickness is due to muscle and not due to fat.
- **Slide 15:** With this basic knowledge of feeder cattle grading, let's look at some feeder calves and test your feeder cattle grading skills.
- Slide 16: This 650 pound heifer has a lot of length and height and is in a very trim condition. These 3 factors tell us the growth curve is very long and that she will reach a heavy weight before depositing fat. The frames size for this heifer is *Large* ++. When viewed from the rear, this heifer exhibits a thin muscle shape, which places her as a #3 muscle grade.
- **Slide 17:** This 750 pound steer gives the impression of having enough scale to be considered as a high medium or low large frame size. The heaviness of muscling and super width at the ground are indications this steer will have an extended growth curve, which would lead one to place him as a *Large* frame size. The high degree of muscling easily makes this steer a #1++ muscle grade.
- **Slide 18:** This 520 pound steer is average in length and height leaving him a middle of the pack *Medium* framed feeder calf. The muscle design when viewed from the rear is fairly equal in width from top and bottom, but does not exhibit a lot of expression. This places this steer as a #2 muscle grade.
- Slide 19: This Charolais steer is very trim at 725 pounds. The frame size sits on the border between medium and large, while the muscle is also on the border between #2 and #1. The trim condition of this steer at his present weight is good indicator that he will make the 1250 pounds before finishing with 0.4 inch of fat. Taken together, this steer would be placed as a *Large* frame size, and would be given a #1– muscle grade.
- **Slide 20:** This 475 pound black baldy steer is short bodied, short legged, and short headed, which makes this steer a *Small* frame size. While this calf does have some muscle, it lacks the thickness that is needed for a #1 muscle grade, making it a #2+ muscle grade.

- **Slide 21:** This 810 pound heifer is huge. She is very tall, really long, and almost off the scale for a heifer on frame size. This heifer is easily a *Large+++* frame size. When viewed from the rear this heifer appears to be standing fairly wide, but her thin muscle is similar to that for a dairy animal. This heifer would be given a #3 muscle grade.
- Slide 22: This 635 pound Hereford heifer has enough length and height to reach the very top of the Medium frame size group, making her a *Medium*+ frame size. The muscle view from the rear is fairly good, but not extreme in shape, which makes the heifer a #2+ *muscle grade*.
- Slide 23: This 640 pound eared heifer is on the border between small and medium framed. With only 360 pounds left to make a Medium frame size at 1000 pounds, this calf is given a frame size of *Medium*—. The rear view for this heifer shows that the feet are right together and the triangle shape is very apparent. This calf is a #3 muscle grade.
- **Slide 24:** The frame size on this 690 pound black steer is somewhat tricky to determine. He is too short bodied to be a large frame, but his muscling will help him finish at close to 1100 pounds, making him a *Medium*+ frame size. This calf is very thick when viewed from behind, making this steer an easy #1 muscle grade.
- Slide 25: This 810 pound black steer has excellent length and height, easily making him a *Large* frame size. He is also a thick, heavily muscled steer, making him an easy #1 muscle grade.
- **Slide 26:** This 515 heifer is short legged and has a short head, which taken together make her *Small* framed. The muscle on this heifer is somewhat suspect, but the shape when viewed from the rear is more rectangular in appearance than it is triangular, giving this heifer a #2-- muscle grade.
- Slide 27: This 585 pound heifer is big framed and very thin with maturity a long way away. She fairly easily is a *Large*+ frame size. The muscle reads fairly narrow over the top and at the ground for this heifer, and would make her a #3+ muscle grade. However, this heifer looks sick and empty which would override any other grades and place her in the *Inferior* feeder calf grade.
- Slide 28: This 600 pound yellow steer is of adequate frame size for it to finish at 1200 pounds. It is not quite a Large frame, but would be classified as a *Medium*+ frame size. Although the muscling through the stifle is too flat for this steer to be a #1 muscle grade, its muscling is good enough for it to be a #2++ muscle grade.

- Slide 29: This 575 pound steer is fairly easily a *Medium*+ frame size. In the side profile this steer appears to be a #2 muscle grade, but when viewed from the rear this steer's feet are together and its muscling is fairly thin making it a #3++ muscle grade. However, the down head and ears and the rough hair coat for this steer makes an *Inferior* grade a possibility.
- Slide 30: This striped heifer weighs 775 pounds and is starting to add some flesh. She will have no problem making the 1000 pounds that are needed for a Medium framed calf, but it is questionable if she can make the 1150 pounds that are necessary for a Large framed calf. As this heifer is fairly narrow based when viewed from behind, her muscling will not have much influence on her frame size score. With these thoughts in mind, a frame size of *Medium* ++ and a #3+ muscle grade are the best choices.
- **Slide 31:** This 685 pounds black steer is a nice calf with excellent muscling. This steer is not quite big enough to be a Large frame size, although its muscling will help some. Nonetheless, this steer is probably best classified as a *Medium*+ frame size. It's thick muscling and easily identified rectangular shape when viewed from the rear easily puts this steer in the #1- muscle grade.
- **Slide 32:** This 605 pound steer appears to be a dairy cross with very little muscling. Most dairy crosses are Large framed, but the lack of muscling in this steer would reduce its frame size to a *Medium*+. The extreme light muscling in this steer, as evidenced by the pronounced triangular shape when viewed from behind, makes it the very highest #4 possible, or a #4+++ muscle grade.
- Slide 33: You are now equipped with the basics of feeder cattle grading. Your proficiency and confidence in grading feeder cattle will grow as you put these skills to work. Good luck as you begin applying your feeder cattle grading skills.