

# Judging Beef Heifers

*(Script for the Judging Beef Heifers Presentation)*

**Slide 1:** Title Slide

**Slide 2:** Many consider judging beef heifers to be a very challenging activity. However, if you keep a few key points in mind, judging beef heifers can be done successfully. First of all, as with most livestock judging, you should begin your evaluation of beef heifers at the ground level and work your way up, and then start at the rump and work your way forward. It is also important that you know what the important traits are that need to be evaluated, and how these traits rank in terms of importance. Always eliminate any easy placings early in your evaluation. For example, if one heifer is easily the best one in the class, place her first and don't waste valuable time over-evaluating that heifer. And finally, make sure you place the class based on the volume of the important traits they possess. Keeping these key points in mind will help you in placing a class of beef heifers.

**Slide 3:** Let's spend just a few minutes talking about the traits of importance that should be evaluated when judging beef heifers. The most important trait for beef heifers is **soundness and structural correctness**. Heifers must be sound enough to walk significant distances to graze and find water and remain in the herd for a long time. The second trait of importance is **capacity or volume**. Heifer need to have good capacity or volume so they can convert forage to meat or milk and have the ability to maintain their body condition in a pasture environment. The third trait to consider is **style and balance**. Longevity, or the ability to remain in the cow herd for a long time, demands that the various parts of the heifer be put together correctly and that those parts be strong and proportional so that all carry their share of the load. The fourth trait to evaluate is the **degree of muscling** the heifer possesses. Muscle, or meat, is the end product of beef cattle production, so heifers must have adequate muscling. However, we need to make sure heifers are not excessively muscled to the point that it limits the function and production of the heifer. The final trait to evaluate when judging heifers is **femininity**. This trait is referred to as the "pretty" trait. Simply put, heifers should like heifers and not like a steer or a bull.

If one were judging bulls rather than heifers, the ranking of these traits and the order of their importance would need to be rearranged. For bulls, the ranking of traits would be: first, soundness and structural correctness; second, capacity or volume; third, degree of muscling; fourth, style and balance; and the fifth trait of importance, which would replace femininity, is testicular development. Testicles on bulls should be large and extended away from the body for maximum fertility. Small or twisted testicles should be significantly discounted.

**Slide 4:** Now that you know what traits to evaluate, let's discuss each of them in more detail so you can gain a better understanding of what is desired. We'll start with evaluating soundness and structural correctness.

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- Slide 5:** The feet, legs, and connected structure are the biggest factors physically affecting the heifer's longevity. A proper evaluation of soundness and structural correctness should start at the ground and work up a joint at a time. A general evaluation of the front and rear leg column structures, followed by a detailed examination of the feet, pasterns, hocks, knees, rump, and shoulders should be conducted. Faulty structure in any of these areas can have a negative impact on the longevity of the heifer.
- Slide 6:** This first picture illustrates a heifer with the correct structure to the front leg columns. You will notice that the set to the knees and feet allow the feet to sit squarely on the ground, providing the optimum distribution of support for the heifer's weight. The second picture illustrates a condition that is referred to as **splay-footed**. Heifers with this structural defect will be in at their knees and out at their toes. The third picture represents a condition that is referred to as **pigeon-toed**. Heifers with this structural defect will be out at their knees and in at their toes.
- Slide 7:** You should keep in mind that cattle tend to be naturally a little toed out. However, there are some practical problems associated with incorrect structure of the front leg columns if it is too severe. The splay-footed condition puts added pressure on the knee joint, and also causes the inside toes to wear off at a quickened rate. If a heifer is pigeon-toed, there will also be increased pressure on the knee joints and the outside toes will wear off at an accelerated rate. While both of these conditions will reduce the long-term productivity of the heifer, being pigeon-toed is a much worse condition than being splay-footed in heifers.
- Slide 8:** Proper structure to the rear leg column is also important. This picture depicts the rear leg column structure that is desired. The hips, hocks, and feet are aligned in a fairly straight line, providing a good base of support for the heifer. The second picture illustrates a condition referred to as being **cow-hocked**. This structural condition results in heifers being close at the hocks and out at the toes. The third picture represents a heifer that is **bow-legged**. This structural defect is recognized as being out at the hocks and in at the toes.
- Slide 9:** Just as cattle tend to be naturally a little toed-out, they also tend to be naturally a little cow-hocked. However, if the rear leg column structure is too severe, there can be some negative consequences. The cow-hocked condition puts added pressure on the hock joints, and also causes the inside toes to wear off at a quickened rate. The bow-legged condition also puts increased pressure on the hock joints and causes the outside toes to wear off at an accelerated rate. Of the two, the bow-legged condition in heifers is a much more severe problem than is being cow-hocked.
- Slide 10:** Here is shown an actual heifer with the correct rear leg column structure. Notice that the distance between the hocks and the rear feet is about equal. Here is an actual heifer that is incorrect in her rear leg column structure. This heifer is cow-hocked, being in at her hocks and out at her feet.

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- Slide 11:** Now that we've discussed the general structure that is desired in the front and rear leg columns, let's take a look at some of the specifics related to soundness and structural correctness. We'll begin with the feet. The feet on heifers should be big, even toed, and squarely placed with the animal so they are pointing straightforward. This picture shows feet that are turned out and not square with the animal's body. This type of defect puts stress on the inside toes and the inside of the knees. This second picture shows feet with poor depth of heel. The hoof-skin junction of this heifer sets too close to the ground.
- Slide 12:** This picture is an example of an excellent foot. This foot is nice and big with evenly-sized toes, the foot is sitting flatly on the ground, and it has good depth of heel with the hoof-skin junction being well above ground level.
- Slide 13:** The pasterns on heifers should be strong and yet flexible, allowing for cushion and give in the foot and ankle. A straight pastern restricts flex while a pastern with too much set puts added pressure on the joints to handle the weight of the heifer. The pastern shown on the left has too much set, limiting depth of heel and adding pressure to the ankle. Pasterns that have too much set are also referred to as being weak pasterned. The pastern on the right is too straight, and lacks the flex and cushion that is needed. Pasterns that are too straight is a more severe problem than pasterns that are too weak.
- Slide 14:** These two pictures represent animals that have excellent set to their pasterns. The picture on the left illustrates a pastern with good flex and strength, and also shows even-sized toes. The picture on the right picture shows the correct set to both the front and rear pasterns.
- Slide 15:** Correct set the hocks when viewed from the side are important to the overall soundness of heifers. Hocks should be constructed of a clean, flat bone with a slight degree of set allowing for maximum power and mobility. This first picture shows the hock angle that is desired which provides good flex and mobility to the heifer. The second picture shows a hock that has too much set. This structural defect is referred to as **sickle-hocked**, and forces the rear feet too far up under the heifer. This third picture illustrates a heifer that is **post-legged**. The hocks with this structural defect have too little set, resulting in the rear feet being too far back. Of the two, the post-legged condition in heifers is a much more severe problem than is being sickle-hocked
- Slide 16:** What are the negative impacts of incorrect structure in the hocks? The sickle-hocked condition, where the hocks have too much set and the rear feet set too far underneath the heifer, puts added pressure on the hip joint and the rump, and results in poor depth of heel. The post-legged condition in heifers, where there is too little set to the hocks, severely limits flexibility in the hock, and puts a lot of stress on the hock joint because it does not have an opportunity to give. This continuous stress can often result in the hock swelling and the heifer becoming lame. It also results in

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an accelerated rate of wearing on the fronts of the heifer's rear toes. Because of these problems associated with poor hock angle, heifers that are sickle-hocked or post-legged should be discounted.

- Slide 17:** Here is shown an actual heifer that is sickle-hocked. Notice how far underneath the heifer's body that she places her feet. This picture shows an actual heifer that is post-legged. She is very straight in her hocks. Notice how much set she has to her pasterns to compensate for the minimal flex in her hocks.
- Slide 18:** Here is a picture of a heifer with excellent hocks. She has the correct set or angle to her hocks, and has the desired square, flat-boned design that provides maximum flexibility and power and she walks.
- Slide 19:** A correctly designed rump structure is essential for good length of stride. For maximum power and longevity, a rump should be average or above average in length and only very slightly sloping from hooks to pins. Heifers that are too steep in their rump, or have too much slope from the hooks to the pins, will have added pressure put on the joints of their rear leg column and added stress on the hip-loin junction. Being too steep in the rump is often a major contributor towards being sickle-hocked. Heifers with too little slope from their hooks to their pins will also have added pressure put on the joints of their rear leg column, and this will also increase the likelihood of the heifer being post-legged.
- Slide 20:** This picture shows a rump that is too short and excessively steep from the hooks to the pins. This type of rump structure will limit length of stride and decrease the strength required for good mobility.
- Slide 21:** This picture illustrates an excellent rump design. This heifer is very long and level from her hocks to her pins. Unless there are other structural problems associated with the rear leg column, a heifer with this type of rump design will possess a long, powerful, and fluid stride.
- Slide 22:** The set and shape to the shoulder controls the degree of motion a heifer has out of her front end. Improper set, or slope, to their scapula puts added stress on the elbow, knee, and pastern joints and limits flexibility of the front leg column. Poor set to the shoulder is also often associated with other structural defects of the front leg column, such as being buck-kneed or too straight in the pastern joint. Ideally, heifers will also be refined and smooth in their shoulder design. Stated simply, we don't want heifers to have big, coarsely-designed shoulders.
- Slide 23:** The picture on the left shows a heifer whose shoulder is too straight, giving the appearance of the shoulder being pushed into the neck. This results in the front leg coming out further back than desired and upsets the balance of weight on each leg. A straight shoulder will also limit length of stride, especially the degree the leg can

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move forward. The picture on the right shows a heifer that is too big and coarse through the shoulder. If this were all of the animal you were able to see you would have a difficult time determining if this was a heifer or a steer.

- Slide 24:** This picture is a good example of a heifer with nice set and smoothness to her shoulder. An easy way to determine correct shoulder angle is to view cattle on the move with special attention to length of stride. Provided they do not have any structural problems with their rear legs, heifers that have the proper design to the shoulder will place their rear foot into the track made by the front foot when they are on the move.
- Slide 25:** Let's now take a look at the second most important trait when judging beef heifers, evaluating capacity or volume.
- Slide 26:** Capacity refers to the amount of body volume a heifer possesses, and is necessary so that heifers are able to perform at a high level while maintaining their body condition. Capacity is typically associated with production and performance traits and is determined by three factors. The first factor is **body width or rib shape**. We want heifers to be wide bodied and possess good spring of rib. The second factor is **depth of body**. Ideally, when heifers are viewed from the side, body depth should be uniform from front to back with at least 50% of a heifer's height from the top of her back to the ground being body depth. The final factor that influences capacity or volume is **length of body**. We want heifers to have good length of body.
- Slide 27:** These two heifers are excellent examples of heifers that are referred to as snakes. The heifer on the left lacks adequate capacity, being very narrow bodied with no spring of rib. The heifer on the right is too short bodied and lacking in depth, especially through her rear flank. Heifers with this small amount of body capacity would have a difficult time consuming enough grass and hay to maintain their body condition.
- Slide 28:** The rear view of this heifer shows that she has excellent rib shape along with the correct depth and body volume. The side view of the second heifer shows excellent body depth that is uniform from front to rear. These are good pictures to get set in your mind of what good capacity or volume in a beef heifer looks like.
- Slide 29:** The third trait of importance to evaluate in beef heifers is style and balance. Let's discuss what we need to look for.
- Slide 30:** Style and balance deals with how well all the pieces of the heifer fit together. There are four (4) major points to consider when evaluating style and balance. The first point is straightness of the top-line, the second point is the balance between body width, depth and length, the third point is the smoothness and angularity of the front-end, and the fourth point is the blending of the shoulders, ribs, and hips. Let's

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look at a few heifers and see how these four (4) factors are evaluated.

**Slide 31:** This picture illustrates a heifer that is unbalanced and lacks style. She is coarse in her shoulder and does not blend well from her shoulder to her ribs. Her big and coarse shoulder gives the heifer an appearance of being heavier in her front end than in the back end. She is also too thick and deep in her neck, with excess skin on the dewlap.

**Slide 32:** This picture shows another heifer that lacks style and balance. She has a coarse, open shoulder design and is pinched in her forerib, resulting in poor blending of the shoulder and forerib. In addition, she is very short and thick necked.

**Slide 33:** Here is shown an example of a heifer with a good front-end. She is very smooth and angular through her front-end, and blends beautifully from head to neck, neck to shoulder, and shoulder to rib, with excellent style about her front two-thirds.

**Slide 34:** This heifer is a good representation of excellent style and balance. She has a very long, clean neck, and blends very nicely from head to neck, neck to shoulder, shoulder to rib, and body to hip. She is also straight in her top-line, and has a nice balance of body width, depth, and length.

**Slide 35:** Because heifers will ultimately be used to produce market steers, they need to have adequate muscling that can be passed on to their offspring. Let's spend a few minutes going over how we evaluate degree of muscling in heifers.

**Slide 36:** There are three (3) primary areas we consider when evaluating degree of muscling in heifers. The first area to evaluate is the thickness through the center of the quarter when the heifer is viewed from the rear. The second area to evaluate is base width, or width between the rear feet, as the heifer walks. The final area to consider is the shape over the heifer's top, or the shape to the loin. A muscular top will have the desired butterfly shape. It is critical to always compare base width at the ground to top width. On a lean animal that is heavy muscled, base width and top width will be equal. Remember that fat can mask, change, hide, and sometimes invent shape, resulting in a mistake in correctly evaluating muscle.

**Slide 37:** This red heifer is an example of one that is light muscled and narrow. She is narrow and lacks muscle expression through the center of her quarter, and is much narrower based than she is over her top. This black heifer is an example of one that is average muscled. She has fairly good width through the center of her quarter and between her rear feet. This final picture shows a heavy muscled heifer. She is very thick the center of her quarter, and her base width and top width are about equal. Although heavy muscling in heifers is preferred, we do not want muscling so heavy that it restricts movement or causes other problems related to production.

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- Slide 38:** The grooved top in this heifer reveals a large ribeye muscle on each side of the backbone. A light muscled heifer would have the backbone as the highest point of the top, with the remainder of the top tapering off from the backbone to form the shape of an upside down V.
- Slide 39:** The final trait to evaluate when judging beef heifers is femininity. Let's take a look at what is involved with this trait.
- Slide 40:** Femininity in heifers refers to the "prettiness" that heifers exhibit. Traits to consider when evaluating femininity include refinement of head, length of neck, angularity of the neck and shoulder, and the blending of the shoulder to the forerib.
- Slide 41:** This picture is a good illustration of a heifer that does not exhibit good femininity. She is coarse headed, too thick through her neck, and is too thick and coarse through her shoulder. From this photo, which only shows the front third of the animal, it is difficult to determine if this is really a heifer and not a steer.
- Slide 42:** This heifer also lacks femininity, as she is too thick and coarse through her shoulder exhibits excess hide in her dewlap. As with the previous heifer, you can't really tell if this is a heifer or a steer by looking solely at the front one-third.
- Slide 43:** This picture shows a heifer that just screams femininity. She has a long, refined head with a narrow muzzle and a long, clean neck. She also has a clean, angular shoulder, and has a good blending of shoulder to forerib. In a word, she is "pretty".
- Slide 44:** We have now covered the basic traits that should be considered when judging beef heifers. As long as you remember what the important traits are, and you know what "correct" looks like for each of these traits, you should be able to successfully evaluate beef heifers. As with anything, practice will help you hone your newly acquired skills. So look at lots of heifers and practice your judging skills to improve your chances during competitions.
- Slide 45:** Good luck as you compete in judging beef heifers.