NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Expected Progeny Differences and Livestock Evaluation

Place in order after your visual appraisal and state WHY.

1. What are the MOST important traits to look for in a bull?
2. What are EPDs?
	1. Expected Progeny Difference
		1. Predict differences in performance between future offspring of individuals of the same breed when each is mated to animals of the same average genetic merit
		2. The purpose is to compare the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an animal as a parent
3. Traits used for EPD
	1. Birth weight (BW)
	2. Weaning weight (WW)
	3. Yearling weight (YW)
	4. Milking ability (MA)
	5. Total maternal traits
	6. Carcass cutability
	7. Carcass quality
	8. Gestation length
	9. Scrotal circumference
	10. Pelvic area (PA)
		1. \*The traits in bold are the most commonly referenced traits with regard to beef cattle.\*
4. Selecting Cattle with EPDs
	1. It is important to understand and use EPDs when they are provided.
	2. However, EPDs should be combined with visual appraisal to improve decision making accuracy.
5. Birth Weight (BW)
	1. Major contributing factor associated with calving difficulties
	2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the BW, the greater chance of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Birth Weight Scenario
	1. If these bulls were to be mated to first calf heifers, which bull would you chose to breed to the heifers?
		1. Bull \_\_\_\_\_
			1. He has the lowest BW; meaning his calves will average \_\_\_\_ pounds lighter than bull B’s & 10 pounds lighter than bull A’s
7. Weaning(WW) & Yearling Weight (YW)
	1. Commonly referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Important because cattle are sold by \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. A positive growth rate means a profitable investment
	4. WW and YW have positive economic impact on selection
	5. WW and YW Scenario
		1. Which bull is most desirable if offspring are sold at WW?
			1. Bull \_\_\_\_\_
			2. His offspring average 6 lbs heavier than bull B
		2. Which is most desirable if they are marked as finished cattle?
			1. Bull \_\_\_\_\_
			2. He has the highest YW
8. Milking Ability (MA)
	1. Measuring the additional pounds of weaning weight from daughters due to genes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. Milking Ability Scenario
	1. The difference in MA EPD is 10 lbs
		1. This does not mean daughters from bull A produce 10 lbs more milk, but that bull A daughters would wean calves that are on average 10 lbs \_\_\_\_\_\_\_\_\_\_\_\_ than bull B
	2. Milking Ability Scenario
		1. Which bull has a more desirable MA EPD?
			1. It depends on the \_\_\_\_\_\_\_\_\_\_\_\_\_. If higher milking ability is desired, \_\_\_\_\_\_\_ would be chosen. If the scenario says forage is low quality then bull B would be chosen because the daughters of bull A would need higher quality grasses to reach expected values.
10. Selection Scenario
	1. This is the situation or environment that cattle are going to be placed into upon completion of the selection process.
		1. ALWAYS READ THE SCENARIO OR SITUATION FIRST!
		2. It determines what traits to emphasize when evaluating the EPDs.
11. Example Statements
	1. The ranch labor is limited
		1. This means no one is there to pull calves, so you should select a low birth weight.
	2. All offspring are sold at weaning.
		1. This indicates that the weaning weight should be emphasized heavily
	3. The producer is retaining ownership through the feedlot.
		1. This indicates that the producer won’t sell the calves until they are fed in the feedlot and go to harvest. Yearling weight is the most important.
12. Other Important Information
	1. Each beef breed has different breed averages for all EPDs.
	2. EPDs should prepare you to understand genetic performance profiles.
13. Bull Data Statistics

Know which bull would be the best option for your herd of first class heifers and why?

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1. On the Arrowhead ranch, how do they use EPD’s?

Part 2-Livestock Evaluation

1. Rank the shoes of your classmates from 1 through 4 with a positive and a negative reason of why they were placed that way.

P-

N-

P-

N-

P-

N-

P-

N-

