

Beef Cattle Herd Checklist

Beef Genetic Management

Specialist:

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I. Problems that may have genetic implications

- A. Low Reproductive Performance
- B. Calving Difficulty
- C. Calf Mortality or Unthriftiness
- D. Light Calf Weights

II. Problems associated with a genetic by environmental interaction (Cattle genetics do not match the management and environment of the operation).

A. Consequences of Genetics For Large Cow Size

- 1. Increased calf weights
- 2. Increased feed consumption - if not adequately provided then we can see reduced condition and reduced rebreeding particularly in 2nd calf heifers

B. Consequences of Genetics For Extreme Milking Ability

- 1. Increased calf weights
- 2. Increased feed consumption - if not adequately provided then we can see reduced condition and reduced rebreeding particularly in 2nd calf heifers

SOLUTIONS:

- 1. Fit cow size and milk production to the environment. In Kentucky this usually means selecting for a moderate size and milking ability cow. If cow size is a problem and keeping replacement heifers select the breed of bull to make reduction in frame size. This will usually be a British type breed, Angus, Polled Hereford, Hereford, Shorthorn or a smaller Continental type, Tarentaise, some Gelbvieh, some Salers, or a moderate Zebu cross. For the most part these breeds will also provide moderate milking ability. Once a breed is selected chose a specific bull based on EPDs. If a mature weight EPD is unavailable, select for high weaning weight and moderate yearling weight EPDs. Select for milking ability based on need. Always keep calving ease or birth weight EPDs in mind, especially when breeding to 1st calf heifers.

2. Develop heifers properly and always provide enough feed to maintain at least a condition score 5 in the cow herd.
- III. Problems associated with reduced hybrid vigor (lack of crossbreeding)
- A. Reduced Total Production – lbs calf weaned / cow exposed
 1. Reduced reproductive rate
 2. Increased mortality
 3. Decreased thriftiness
 4. Reduced milk production
 5. Reduced growth rate
 - B. Reduced Cow Longevity

SOLUTIONS:

1. Design a crossbreeding program. Try to never have more than 75% of one breed in an animal, especially in replacement females. Three potential crossbreeding systems that can attain this result are:

Terminal Cross: Buy crossbred replacement females, bred to easy calving bulls if possible. After they have had a calf all cows will be bred to high growth bulls and all offspring sold.

Modified Rotational Cross: Breed all heifers and some of the younger cow herd (more than twice as many as replacements will be needed) to a maternal type bull that has reduced birth weight EPDs and keep all replacements from these matings. Breed the remainder of the herd to a high growth terminal type bull(s) to maximize poundage at your marketing end-point. All of the calves from this terminal mating will be sold.

Rotation: Select two or three breeds that fit the management and environment and rotate between the breed of bull used every 4 years.

- IV. Problems associated with selection
- A. Calving Difficulty
 1. #1 cause of calving problems is BIRTH WEIGHT
 2. Inadequate pelvic size
 3. Calf shape – very little effect (research can not find an association between bull or calf shape and calving difficulties, birth weight is the only measurable cause found)
 4. Over-condition – must be extremely fat to be a problem
 5. Under-condition – more common and more serious to total production

- B. Under Weight Calves
 - 1. Direct growth
 - 2. Milk – only when keeping replacements

- C. Other Economically Important Traits
 - 1. Quality
 - 2. Yield
 - 3. Scrotal circumference

SOLUTIONS:

- 1. To reduce calving difficulty, take pelvic measurements and eliminate those females that do not fit a minimum standard. Breed all first calf heifers to any easy calving bulls based on birth weight EPDs or calving ease EPD if available. Making secondary selections on other needs. On older cows restrictions on breed, birth weight and calving ease can be reduced, unless calving difficulty has been a particular problem.
- 2. Increasing calf weight can be done easily and rapidly. Maintain adequate milk in replacements by using milking ability EPDs. Select for direct growth by using the EPD closest to your marketing end-point (weaning, yearling or Hot Carcass Weight). Always keep genetic correlations in mind.
- 3. If carcass quality and yield are of economic importance to the producer the selecting bulls with good carcass EPDs will give better results.

V. Problems associated with genetic correlations (Positive means that as one trait increases the other trait increases and vice versa. Negative means as one trait increases the other trait decreases and vice versa).

- A. Negative Correlation Between Growth and Milk
- B. Positive Correlation Between Growth and Birth Weight
- C. Positive Correlation Between Growth and Mature Size
- D. Positive Correlation Between Yield and Quality Grade
- E. Positive Correlation Between Pelvic Area and Frame Size
- F. Negative Correlation Between Fat and Reproductive Performance
- G. Correlations Between Tenderness and Other Traits?

SOLUTIONS:

- 1. Always be aware of how selection for one trait may affect another. Never make selections to make improvements in one area without knowing what is happening to other traits.

Beef Nutrition/Management

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Excessive treatment or sickness rate at receiving or weaning time.

Questions to ask or information to obtain

These questions assume that a good vaccination and herd health program is in place.

1. Is a stress ration being fed?
2. What is the nutrient content of the ration being fed? (Obtain a label or the formula if farm mixed)
3. How much ration is being consumed per head daily?
4. Is it a complete ration (fiber included) or should hay be available with it?
5. How long is the stress ration (or anything else) being fed?
6. What is the water source of the cattle?
7. Are they drinking well? (Do you observe them drinking, do they look gant or are they full?)

Stocker or grazing cattle are not gaining well.

1. How many are in the group?
2. What forage are the cattle grazing?
3. How much forage is available? (acres and inches of grazable height)
4. What is the maturity of the forage being grazed?
5. Are the cattle showing signs of fescue toxicosis?
6. Is shade available?
7. Are the cattle shed off well?
8. What is the water source?
9. What is the water temperature where they are drinking?
10. What minerals are being supplemented? (Obtain a label)
11. How much mineral is being consumed daily?
12. Is an ionophore being fed? If so, how much is consumed each day?
13. Is there evidence of bloating? If so, how prevalent is it?
14. Is there evidence of sore feet, limping? If so, how prevalent is it?

Backgrounding or cattle on stored feeds are not gaining well.

1. How many are in the group?
2. What feeds are being fed?
3. Is a forage or feed analysis available?
4. If hand feeding, how many pounds are being fed per head daily?
5. Is an energy supplement being provided? If so, how many pounds per head daily are being fed?
6. Is a protein supplement being provided? If so, how many pounds per head daily are being fed?
7. Are heifers and steers fed together? If so, is MGA being provided?
8. Is the feeding area muddy? If so, how deep is the mud?
9. If bunks are used in the feeding area, how much linear space per head is available?
10. How many times per day are the cattle fed?
11. If silage is being fed, what is the smell, temperature and length of chop of the silage in the bunk?
12. If round bale hay or haylage is being fed, are they being fed in hay rings?
13. What is the best estimate of bale weights and dry matter content?
14. Is an ionophore being fed? If so, how much is being consumed each day?
15. What minerals are being supplemented? (Obtain a label)
16. How much mineral is being consumed daily?
17. What is the water source?
18. Is it ice free in winter or protected from heating in winter?

Beef Reproductive Management

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Please call if problem occurs.

