

# 2024 CAIP Investment Area Guidelines: LARGE ANIMAL



These guidelines represent one of 11 investment areas within the **County Agricultural Investment Program (CAIP)** to provide Kentucky agricultural producers cost-share assistance on practices that increase net farm income and opportunities to try new/innovative technologies or systems that improve farm efficiency and productivity.

Funded participants shall adhere to all local, state, and federal rules and regulations.

## A. Cattle – Beef & Dairy

### Prerequisites:

- **All Beef & Dairy applicants** must become Kentucky Beef Quality & Care Assurance (BQCA) certified before funding is received.
- **“1. Genetics”**
  - **All bulls** purchased through this program must pass a Breeding Soundness Evaluation (BSE) – within 120 days – prior to purchase.
  - **All breeding stock (bulls/heifers)** must be a minimum age of 12-months.
  - **Ownership of all breeding stock** must be maintained for a minimum of two (2) successive breeding seasons, and a minimum of twelve (12) months.
  - **All bulls** purchased through this program must be genomically tested (genomically-enhanced EPDs) or have an accuracy value for Calving Ease Direct EPD of .25 or above.
- **“2. Handling Facilities”**  
**Minimum herd size** to qualify for handling facilities cost-share – **beef:** 10 mature cows or 35 backgrounding cattle / **dairy:** 40-head herd
- **“3. Milk Production”**  
**Dairy applicants** shall be permitted by the Kentucky Milk Safety Branch.

### Limits:

- **Bull Purchases** – limit of two (2) bulls per program year
- **Heifer Purchases** – limit of five (5) heifers per program year

## **Eligible Cost-share Items (Cattle – Beef & Dairy):**

### **1. Genetics**

- a. Bulls (purchase only) **50%**
  - i. Expected Progeny Differences (EPDs) must be certified to meet the requirements set forth in the state EPD standards in Appendix A.
  - ii. Must qualify within one of the two bull type categories selected by the producer at the time of application.
  - iii. Limited to reimbursement for two (2) bulls per program year.
  - iv. **Beef:** When selecting bulls/semen for each of the four bull type categories, the following traits must be met to qualify:
    1. **Balanced Trait Bulls**, the EPD requirements must be met for calving ease, milking ability, and either weaning weight or yearling weight guidelines.  
*An alternative method can be used that requires the bull to meet the minimum calving ease EPD and minimum maternal index that is specific to the breed, if available.*
    2. **Carcass Merit Bulls** must meet minimum calving ease and index value that are breed specific, if available.
    3. **Heifer Acceptable Bulls** will have to meet minimum calving ease and either weaning weight or yearling weight guidelines.
    4. **Terminal Bulls**, the EPDs shall meet the calving ease and either weaning weight or yearling weight guidelines, depending on the targeted market.
  - v. **Dairy:** Use the Lifetime Net Merit Index when selecting (<http://aipl.arsusda.gov/reference/nmcalc.htm>)
    1. This score is an economic index based on milk, fat, protein, somatic cell score, productive life, daughter pregnancy rate, calving ability, udder, feet and legs, and body size.
    2. Semen purchased from artificial insemination (AI) organizations must be from bulls in the upper 20% (80th percentile) for their respective breeds.
    3. Natural service bulls must have sires that are in the upper 20% and dams in the upper 30% (70<sup>th</sup> percentile) for their respective breeds for the Net Merit Index.
- b. Testing: DNA, genomics (heifers or bulls), semen, Breeding Soundness Exam (BSE) (to be conducted by herd veterinarian) **75%**
- c. Whole herd or individual animal disease diagnostic testing (live animal only) **50%**
- d. Artificial Insemination **75%**
  - i. Semen **75%**
  - ii. AI Procedure (*excludes personal labor*) **75%**
  - iii. AI School **75%**
  - iv. AI Pharmaceuticals **75%**
  - v. AI Equipment, *excluding liquid nitrogen, gloves, sheaths, and other consumables* **75%**
- e. Estrus synchronization (natural service or AI) **75%**
- f. Embryo transfer work (**includes embryos**) **50%**
- g. Heifers – Commercial bred or open heifers **50%**
  - i. Applicant must submit Heifer Affidavit – Producer Report for heifer purchases and include documentation of veterinary examination.
  - ii. All heifers purchased shall have been developed following the minimum guidelines outlined by the University of Kentucky and the Kentucky Department of Agriculture's "Herd Builders" replacement heifer program (Appendix B).
  - iii. Beginning in 2019: Heifers under 30 months of age purchased with a calf are eligible, but do not require pelvic measurement and tract scores.

- iv. Limited to reimbursement for five (5) heifers per program year
- h. Herd pregnancy checks **50%**
- i. Vaccines **25%**

## 2. **Handling Facilities**

including secure lots or pens for holding, sorting, bulls, calves

- a. Commercial headgate, headlock stanchions, crowding tub and gate, chutes – holding, squeeze, curved or offset working, loading **50%**
- b. Gates, corral panels, catch lanes, management rails, and materials for pens **50%**
- c. Scale **50%**
- d. Flooring: Gravel, filter fabric (including filter fabric pads for heavy use areas), concrete, and contracted site preparation **50%**
- e. Forage/TMR mixers, feeding equipment systems **50%**
- f. Creep gate, creep feeder, mineral feeder, feed bunk (including portable), trough **50%**
- g. Animal waste handling and distribution equipment (*excluding motorized vehicles*) or custom services **50%**
- h. Misting/sprinkler systems, cooling fans, cattle back rubs **50%**
- i. Temporary or permanent shade (*excluding trees*) – material costs necessary for construction of temporary or permanent shade for cattle, including shade cloth **50%**
- j. Calf hutches, palpation rails, hoof trimming chute or table, free-stall mattresses including waterbeds, specialized equipment for bedding free stalls, and footbaths **50%**
- k. Freeze branding equipment (*excludes liquid nitrogen, dry ice, and other consumables*); ear tagging and tattoo equipment (*excludes tags*) **50%**
- l. Castration tools, including banders **50%**
- m. Cost of having a Nutrient Management Plan or Comprehensive Nutrient Management Plan developed **75%**

## 3. **Milk Production**

- a. Milking equipment and generator, including robotic milker **75%**
- b. Cooling and raw milk storage equipment **75%**
- c. Equipment service check-up and/or system analysis **25%**
- d. Animal waste handling and distribution equipment (*excluding motorized vehicles*) or custom services **50%**
- e. Rubber flooring or concrete for heavy cow and human traffic area **50%**
- f. DHIA testing **75%**
- g. Somatic cell testing tools, kits **75%**
- h. Milk weigh meters / weigh jars **50%**

4. **Education** – Cost of participation in a master-level agricultural education program (e.g. Master Cattleman, etc.) **75%**

5. Biosecurity signage **75%**

### **Exceptions/Limitations/Exclusions:**

- **Emergency Early Release Clause:** The local program administrator shall reserve the right to approve an early release, if it is determined that an animal, due to physical or disposition problems, is no longer considered sound for breeding purposes. The local program administrator can require the animal to undergo an examination by a licensed veterinarian to assist in determination.

- **Genetic Diversification Clause:** In the event that a producer retains female offspring sired by a cost-shared bull for use as breeding stock, then the cost-shared bull may be sold and replaced by another bull of equal or greater value. The replacement animal **shall not** be eligible for additional CAIP funds.
- **Beginning in 2010**, all transport equipment was removed as eligible cost-share items from all investment areas. This exclusion includes trailers, wagons, and carts with the primary function of transportation.

## B. Equine

### Eligible Cost-share Items:

1. **Genetics**
  - a. Purchase of breeding stock **50%**
  - b. Artificial Insemination **75%**
    - i. Semen **75%**
    - ii. AI Procedure (*excludes personal labor*) **75%**
    - iii. AI Equipment, *excluding liquid nitrogen, gloves, sheaths, and other consumables* **75%**
  - c. Embryo transfer work (includes embryos) **50%**
2. Equine exerciser equipment (*excluding motorized vehicles*) **75%**
3. Temporary or permanent shade (*excluding trees*) – material costs necessary for the construction of temporary or permanent shade for livestock **50%**
4. Cooling fans, shade blankets **50%**
5. Mare/foal monitoring system (including alerts, camera, and contracted installation services) **50%**
6. Vaccines **25%**
7. Disease diagnostic testing (live animal only) **50%**
8. Animal waste handling and distribution equipment (*excluding motorized vehicles*) or custom services **50%**
9. Hay mangers **25%**
10. Cost of having a Nutrient Management Plan or Comprehensive Nutrient Management Plan developed **75%**
11. Cost of participation in a master-level agricultural education program **75%**
12. Biosecurity signage **75%**

### Exceptions/Limitations/Exclusions:

- **Emergency Early Release Clause:** The local program administrator shall reserve the right to approve an early release, if it is determined that an animal, due to physical or disposition problems, is no longer considered sound for breeding purposes. The local program administrator can require the animal to undergo an examination by a licensed veterinarian to assist in determination.
- **Genetic Diversification Clause:** In the event that a producer retains female offspring sired by a cost-shared male for use as breeding stock, then the cost-shared male may be sold and replaced by another male of equal or greater value. The replacement animal **shall not** be eligible for additional CAIP funds.
- **Beginning in 2010**, all transport equipment was removed as eligible cost-share items from all investment areas. This exclusion includes trailers, wagons, and carts with the primary function of transportation.

# Appendix A: Expected Progeny Differences

## Beef Sire Selection for Cattle Genetic Improvement Program

(Updated 1/9/2024)

### Introduction

The overall goal of the beef operation should be to increase net income. Net income is a balance between how much is spent on the operation and how much income the operation generates. Therefore, beef producers need to focus on increasing income while minimizing additional cost or reduce cost while trying to maintain income. Although this practice pertains to the entire beef operation, this program is to assist in selecting a bull that helps achieve this goal.

Two practices are available to improve the genetics of commercial beef operations: crossbreeding and individual bull selection. Crossbreeding has a major economic impact on your herd and should be practiced by commercial cattlemen (additional information is available in ASC-168, available at your county Extension office); however, this program does not require crossbreeding.

When looking for a bull to purchase for your operation it is important to realize that as you make progress to improve one trait you often lose ground in another trait. For example, as we select for increased growth, which has a positive impact on income, we usually inadvertently increase the mature size and maintenance costs of our cows through retaining replacements. Finding the balance between the productivity level of the cow (growth and milk) and the required energy to maintain her is very difficult and, if not done properly, will likely result in decreased reproduction. Research has shown that cow efficiency is dependent on the level of nutrition that they receive. Larger high-producing cows are the most efficient in very lush, high nutritional environments (Average Kentucky forages would not support this level of productivity) and smaller low-producing cows are the most efficient in limited nutritional situations. Under optimum nutrition there are very little differences between the breed types. Before you buy a bull it is important to consider what you want to produce and what resources (primarily nutrition) you have available.

### Bull Purchasing

When purchasing a bull there are four primary characteristics that should be assessed: reproductive soundness; structural soundness; visual evaluation; and performance characteristics.

*Reproductive Soundness* – For a bull to have any value to a beef producer he must be reproductively sound. The best means to determine the reproductive soundness of a bull is through a breeding soundness examination (BSE). If a bull passes his BSE he should have the physical capability to breed and settle cows. This exam does not measure desire and bulls should be observed for their interest in females in heat. ***To receive cost-share money bulls must pass a BSE.***

*Structural Soundness* – To be an efficient breeder a bull must be structurally sound. This means that he should move without pain or discomfort and should have appropriate angles at weight bearing joints. ***There are no requirements for structural soundness; however, producers should evaluate bulls for soundness to avoid problems with breeding and future problems in replacement females.***

*Visual Evaluation* – Many traits that are important to beef producers can only be evaluated through visual observation. These include, but are not limited to: disposition, horned/poled, color, muscling, body capacity, structure, sheath, and testicular development. ***There are no requirements for visual appraisal; however, producers are encouraged to carefully evaluate bulls for visual traits that are of economic or functional importance to them.***

*Performance Characteristics* – The primary reason for purchasing a bull is the expected performance of his calves. If replacement females will be retained then this decision should not be short sided, because the impact will be long lasting. Breeds differ on their level of productivity; therefore, the first decision will be on breed type. Once a breed is determined, selection between bulls for performance should be based on the Expected Progeny Differences (EPDs), whenever possible (For more information on EPDs please see ASC-141). There is no such thing as the “Best Bull”; each individual beef producer must make that determination based on what they want to get from the bull. ***Guidelines have been developed for four specific bull types. Producers must select what type of bull they will purchase (2 choices can be made) on their application then purchase a bull that meets the requirements for that bull type.***

## Conclusions

Crossbreeding and bull selection have very important long-term economical impact on your herd. Selecting the right bull for your operation is a decision that includes setting production goals, analyzing your resources and management, and then locating the bull that best fits your situation. If done properly this process will take time and effort on your part, but the rewards can be significant.

### How to determine if a bull qualifies for the program:

1. All bulls must have genomically enhanced EPD or have a minimum accuracy value of .25 for the Calving Ease Direct EPD. Contact the breed association if you are unsure of the bull's status.
2. All categories require that the bull meet a minimum Calving Ease or maximum Birth Weight EPD. If the breed you are using computes Calving Ease EPDs then that is the EPD that must be used. The bulls EPD must be equal to or be greater than the value listed for that category. If the breed does not compute Calving Ease EPDs then Birth Weight EPDs will be used. The breeds that use Birth Weight have parentheses around their values. The bulls Birth Weight EPD must be equal to or less than this value.
3. All categories, except Carcass Merit, have a requirement for growth. For Heifer Acceptable and Terminal Sire categories the bull's Weaning Weight **OR** Yearling Weight EPD must be equal to or greater than the value listed. For the Balanced Trait category, the bull's Weaning Weight **OR** Yearling Weight EPD must be equal to or above the minimum EPD **AND** be below the maximum Yearling Weight Value.
4. Only Balanced Trait bulls have a Milk EPD requirement. Bulls must have an EPD that is in between the two values listed. The other three categories have no requirement for milk. If you are purchasing a Heifer Acceptable or Carcass Merit bull and will be keeping back replacement daughters, you should consider the Milk EPD of the bull when making your selection decision. Remember, females that milk more have higher nutritional requirements and should be fed appropriately to maintain good reproduction.
5. Carcass Merit bulls will be evaluated based on their selection index values that reward improved carcass characteristics. Only breeds that offer a selection index that stresses feedlot and carcass merits will qualify for this category. A minimum Calving Ease value is also required.
6. For the Balanced Trait category there is an alternative method that can be used for some breeds. If a breed has a selection index that focuses on performance through weaning with the intent of retaining replacement females then that index may be used. The bull must meet the minimum Calving Ease value and must meet the minimum Index value. **Using a selection index is the best selection tool available because it is based on the economic value of the bulls for that category.**
7. Other traits that may have importance to many Kentucky beef producers, but are not included in the requirements, are Docility and the fertility EPDs (Heifer Pregnancy, Stayability, Sustained Cow Fertility, Preg30).

For more information there is a video available at your county Extension office or contact your county agent for Agriculture and Natural Resources or Darrh Bullock, University of Kentucky Beef Extension Specialist (859-257-7514 or [dbullock@uky.edu](mailto:dbullock@uky.edu)).

## Bull Calculator

An online tool has been developed to assist producers to determine if a bull qualifies for their desired category. The website is: <http://afs.ca.uky.edu/beef/KBAT>

From the launch page above, you can chose whether you plan to use the calculator to assist in purchasing a bull or if you are a seedstock producer that would like to identify which categories the bulls being sold qualify for. These tools are for your convenience, but you are responsible for putting in the correct values and the University of Kentucky and Kentucky Ag Development Fund is not liable for incorrect designations for any reason.

List of EPDs by bull type is available on-line at [https://www.kyagr.com/agpolicy/documents/2024-Program-Guidelines-Applications/ADF\\_APP\\_caip-epd-standards.pdf](https://www.kyagr.com/agpolicy/documents/2024-Program-Guidelines-Applications/ADF_APP_caip-epd-standards.pdf).

## Appendix B: Heifer Purchases

### Requirements for Heifer Purchases Program - Beef

(<http://www.kyagr.com/marketing/beef.html>)

#### **Bred Heifers:**

1. All bred heifers must be bred to calving ease bulls based on their EPDs (see Beef Sire Selection for Cattle Genetics Improvement Program). **The EPDs of the service sire must be provided at the time of sale.**
2. All bred heifers must be owned by the consignor at the time of breeding.

#### **Open Heifers:**

1. All open heifers must be owned a minimum of 60 days prior to consignment and be a minimum of 12 months of age on sale day.

#### **Vaccination:**

Heifers must be vaccinated for IBR, BVD, PI3, BRSV, Leptospirosis, (Campylobacter Fetus), and 7-Way Blackleg. Various products may be used on the heifers. Label directions concerning booster vaccinations must be followed. Initial vaccinations and boosters must be administered to all heifers and cannot be given within two weeks prior to sale day. Any intramuscular vaccines should be given in the neck. A veterinarian and/or a signed statement from the producer must validate vaccinations.

#### **Parasite Control:**

All heifers must be treated for internal and external parasites within 45 days of sale. Products for internal parasite control must have a label claim for all stages of the parasite life cycle.

#### **Bred Heifers:**

Consignors guarantee heifers to be safe in calf. If a heifer is proven open by veterinary exam within 30 days after sale, the consignor will replace the heifer or make financial settlement with the buyer. All heifers must have had a yearling pelvic measurement of 150 square centimeters or greater, and/or 18 months old heifers must have a pelvic measurement of 180 square centimeters or greater. Tract score and pelvic measurement work should be done by local vet and statement brought to the sale.

#### **Open Heifers (ready to breed):**

Open heifers that are 15 months of age or less must have a reproductive tract score of 2 or greater on sale day. Heifers that are older than 15 months of age must have a reproductive tract score of 4 or 5 on sale day. Open heifers must be pregnancy checked and certified open. Tract score and pelvic measurement work should be done by local vet and statement brought to the sale. All consignors guarantee that animals are sold as represented. If not then settlement must be made with the buyer.

#### **Blemishes:**

Heifers with active cases of Pinkeye or scars resulting from Pinkeye will not be eligible for sale. Heifers must be polled or dehorned and healed completely by sale day.

#### **Body Condition:**

All heifers must have a minimum body condition score of 5 on sale day. Open heifers must weigh 700 pounds or greater upon check in at the sale.

#### **Sire Requirements:**

Bulls of known ID and breed must service heifers. All service sires must have complete EPD information, with emphasis placed on birth weight and calving ease.



## Requirements for Heifer Purchases Program - Dairy

### Heifers:

1. All bred heifers should be bred AI to bulls that are considered acceptable to use on heifers based upon scoring <10% on percentage of difficult births in heifers (%DBH).
2. All bred heifers must be owned by the consignor at the time of breeding.
3. All open heifers must be owned a minimum of 60 days prior to consignment and be a minimum of 12 months of age on sale day.

### Vaccination:

Heifers must be vaccinated for IBR, BVD, PI3, BRSV, Leptospirosis, and 7-Way Blackleg. Various products may be used on the heifers. Label directions concerning booster vaccinations must be followed. Initial vaccinations and boosters must be administered to all heifers and cannot be given within two weeks prior to sale day. A veterinarian and/or a signed statement from the producer must validate vaccinations. All vaccinations must meet BQA certification and must include a list of all products used.

### Parasite Control:

All heifers must be treated for internal and external parasites within 45 days of sale. Products for internal parasite control must have a label claim for all stages of the parasite life cycle and brands must be listed.

### Bred Heifers:

Consignors guarantee heifers to be safe in calf. If a heifer is proven open by veterinary exam within 30 days after sale, the consignor will replace the heifer or make financial settlement with the buyer. All heifers must have had a yearling pelvic measurement of 150 square centimeters or greater, and/or 18 months old heifers must have a pelvic measurement of 180 square centimeters or greater. Tract score and pelvic measurement work should be done by local vet and statement brought to the sale.

### Open Heifers (ready to breed):

Open heifers must be certified to not be a freemartin. Open heifers must be pregnancy checked and certified open. All consignors guarantee that animals are sold as represented. If not, then settlement must be made with the buyer.

### Blemishes:

Heifers with active cases of Pinkeye or scars resulting from Pinkeye will not be eligible for sale. Heifers with active cases of ringworm or heel warts will not be eligible for sale. Heifers with unsound udders or udders showing evidence of mastitis will not be eligible for sale. Heifers must be polled or dehorned and healed completely by sale day.

### Body Condition:

All heifers must have a body condition score between 2.5-3.5 on sale day. Dairy heifers must be between the median and 95<sup>th</sup> Percentile for wither height based upon the Penn State guidelines for their respective breed.

### Sire Requirements:

Bulls of known ID and breed must service heifers. See item no. 1 in section on Heifers. All service sires must have complete Net Merit Index information.