

HAWAII 4-H LIVESTOCK COUNCIL

BREEDING BEEF PROJECT RULES 2019 – 2020

Eligibility for Show

The 4-H Beef Heifer Project is open to all youth who are 9 years of age as of 1/1/20 and have not turned 19 by 1/1/20. On 1/1/20 if a 4-Her is between the ages of 9 - 13 they will be classified as a junior; if between the ages of 14-19, they will be classified as a senior. The 4-Her must be a member in good standing and enrolled in the 4-H heifer project with the local CES office prior to the heifer weigh in. The 4-Her should be physically capable of handling his/her animal and should be physically caring for their own animal daily throughout the project. The 4-Her must have attended a Quality Assurance Class within the project year.

Heifer Eligibility for the Project

Registered or commercial grade beef replacement heifers are eligible projects. Registered heifers from horned breeds may be shown with horns, so long as those horns are trained using horn weights or an effective sloping procedure (contact your extension agent for more information). Grade heifers must be naturally polled (without horns), dehorned, or tipped. The sire of the heifer must be of a beef breed. If an exhibitor declares that the heifer is registered, the registration papers must be signed off and submitted to the Livestock Agent before the heifer will be allowed to sell. Heifers will be declared ineligible if the animal is not of an acceptable beef type and conformation. Any animal showing predominant (over 50%) dairy breed characteristics shall be eliminated. The animal may be screened for some major defects by the county agent.

All project heifers will be weighed, ear tagged, have DNA collected (using TSUs) and checked for eligibility at this first screening and weigh-in to be held no later than the first week of January of the project year. DNA collected from each heifer needs to be mailed immediately after collection to Kyle Caires, Maui County agent for disease screening and genomic analyses.

It is recommended that 4-Hers accompany their animals at the weigh-in. Heifers are expected to be gentle and trained to lead with a show halter, therefore it is recommended that 4-Hers begin training their animals at the start of the project. To be eligible for the beef heifer contest at the State Farm Fair, the heifer must have earned blue ribbon status at its respective county show. There are two divisions, bred and open (more information below).

To be eligible for the Bred heifer division, the heifer must be pregnant (more details below), and not over 24 months old (via dentition; see Table 1) at the time of their county show. County show dates vary; therefore heifers should be born between 6/12/2018 and 1/8/2019 (Figure 1) to meet breeding requirements (below).

To be eligible for the Open-heifer division, the heifer must be non-pregnant and between 11 months and 17 months of age, at time of their county show. To accomplish this, heifers should be born on, or after, January 1, 2019, but not later than July 7, 2019. More information on aging cattle by teeth is found in Table 1.

Open Heifers		Bred Heifers	
Approximate Birth Date	Age at time of county show	Approximate Birth Date	Age at time of county show
7/7/19	11 months	12/9/18	18 months
6/7/19	12 months	11/9/18	19 months
5/8/19	13 months	10/10/18	20 months
4/8/19	14 months	9/10/18	21 months
3/9/19	15 months	8/11/18	22 months
2/7/19	16 months	7/12/18	23 months
1/8/19	17 months	6/12/18	24 months

Figure 1. Target ages at show, with respective birth dates for heifers exhibited in the breeding beef project.

Table 1. Typical cattle ages when permanent teeth erupt, develop, and wear.

Teeth	Cattle age at occurrence		
	Eruption	Full development	Wear
Incisors			
Pinchers	18 to 24 months	24 months	Leveled at 5 to 6 years, noticeable wear at 7 to 8 years
1 st intermediate pair	24 to 30 months	36 months	Leveled at 6 to 7 years, noticeable wear at 8 to 9 years
2 nd intermediate pair	36 months	48 months	Leveled at 7 to 8 years, noticeable wear at 9 to 10 years
Corners	42 to 48 months	60 months	Leveled at 9 years, noticeable wear at 10 years
Premolars			
1 st cheek tooth pair	24 to 30 months		
2 nd cheek tooth pair	18 to 30 months		
3 rd cheek tooth pair	30 to 36 months		
Molars			
4 th cheek tooth pair	5 to 6 months		
5 th cheek tooth pair	12 to 18 months		
6 th cheek tooth pair	24 to 30 months		

Breeding Guidelines for Heifer classes.

Although tremendous variation does exist in calving seasons amongst cattle breeders in Hawai‘i, many operators calve in the fall, winter and/or early spring. In order to fit our 4-H livestock venues and in consideration of the local industry, Beef Heifer projects must be bred in order calve between October 15th and February 7th, following the state livestock show and sale in which they are exhibited in. To accomplish that goal, these heifers must be bred **no sooner than December 31, and no later than April 30th, of the current 4-H year.** The preferred breeding season to fit the calving season for the majority of ranchers in Hawaii will be between **January 1st and by April 30st**; albeit some prefer to calve in May. Heifers bred and managed in the aforementioned way also provides an additional benefit to May-calving herds, as they have extra time to recover and regain body condition after having their first calf, and as a result will have a greater chance of rebreeding in a timely manner with the cowherd they will be joining.

Heifers may be bred by natural service or through artificial insemination (AI). Advantages to AI include improved biosecurity, and the ability to use a highly proven, calving ease bull with genetic merit for multiple traits. At least one round of AI is suggested for the project; contact your local county agent for more details. Regardless of AI or natural service mating, project heifers should be bred to bulls with low birth weights in order to reduce calving difficulty.

Heifers will be pregnancy tested prior to entry at their county show by the county agent or a veterinarian. Heifers that are close to the April 30th breeding deadline may be re-checked again at the official weigh in prior to the county show. Pregnant heifers meeting these guidelines are eligible for entry in the Bred Heifer division contest. Heifers that are not pregnant are eligible for entry in the Open Heifer division contest.

Nutrition and Project Management

The member must have adequate facilities and feed for the project. Heifers should be fed a ration and/or managed on good pasture to achieve continuous growth throughout the project (gaining around 1.2 to 1.5 pounds of body weight per day). It is important that these heifers reach proper weights and body condition scores for successful breeding, maintenance of pregnancy, showing and sale. At the same time, the heifer should not be managed to become overly fat or obese; extremes should be avoided.

Accurate records must be kept on the heifers! It is important that members have dates written down as to when the heifer was AI bred and or exposed to the bull, along with any other data (supplemental sheet for the record book will be provided) that could be beneficial to the potential buyer. Prior to picking up the heifer, 4-H members should ask the breeder basic information about their heifer including the approximate birth date, breed composition, sire information (individual or multiple sire, age, breed, etc.) and dam (ID, age, breed, production record, etc.) and vaccination/deworming schedule. A supplemental sheet will be given to 4-Hers enrolled in the Breeding Beef project to fill out and add to their project books.

Animal Health

At the start of the project, 4-Hers should seek advice from the county extension agent or a local veterinarian about preventing diseases such as BVD, IBR, Leptospirosis, Vibriosis, and brucellosis through vaccination with the use of either modified live or killed vaccines. To maximize protection against reproductive loss, vaccinations against Leptospirosis (5-way) and Vibriosis should be given between 60 and 30 days prior to breeding. A booster vaccination against IBR and BVD is typically required between 60 and 30 days prior to breeding. Modified live viral vaccines for IBR and BVD are recommended. If killed viral vaccine products are used, two boosters are strongly recommended. Follow label directions for all products used. DNA collected from each heifer via TSU method at the start of the project will be sent to Kyle Caires, Maui County Livestock agent, for disease screening.

Animal Substitutions

If a breeding or health problem (death, severe injury or illness) should occur, as evidenced by a veterinarian or the county agent, a substitute heifer maybe allowed if certified and approved in writing with the county agent by the third week of January. For substitution to occur, the 4-Her is responsible for notifying their leader, the beef heifer chairperson and their county extension agent as soon as possible.

State Show and Sale

Replacement Heifer Contest

There will be two divisions (classes) for Heifers: Bred (pregnant) and Open (non-pregnant). Weight classes (if needed) will be determined by the show judge, and state livestock screening committee. Heifers will be judged on conformation, performance and overall quality and condition. The top two heifers from each division will entered in a new class, and both a Supreme Grand Champion, and Supreme Reserve champion will be chosen. All heifers must be shown by 4-Her who officially enrolled heifer at weigh in of project.

Record Book Contest

4-Hers are expected to keep complete and current record and project books that reflect the goals,

efforts, and expenditures of the 4-H member's project. Independence of family assistance will be evaluated. All books must be completed by 4-Hers themselves. A supplemental sheet will be given to 4-Hers enrolled in the Breeding Beef project to fill out and add to their project books. A completed project book is mandatory to enter the contest and auction. Beef Breeding project record books will be evaluated similar to Market Beef record books with JR and SR awards given unless there are less than three heifers, than the contests will be pooled.

Genomic Values / Genetic Evaluation Contest

All heifers enrolled in the Breeding Beef project participate in the Genomic Evaluation contest. The heifers will be ranked based on their genomic values for multiple economical relevant traits following genomic analysis of the DNA collected at the start of the project. Kyle Caires, Maui County Livestock agent, will tabulate the results similar to those in carcass contests, and results will be provided to the 4-Hers.

Auction and Sale

At the time when state entry forms are submitted, all exhibitors must declare if their Breeding Beef project heifer will be sold at auction. This decision is final. Heifers have to be palpated for pregnancy status and mouthed to determine that age requirements are met by a veterinarian or county agent prior to the weigh-in at the show. Breeding Beef projects eligible for the sale, will not be auctioned by pound, but rather by the lot. Prior to the auction an announcement will be made that all Beef Breeding heifers sold through the sale are sold as is with no slaughtering process. The sale order for heifers will be according to their placement in the show (the highest placed animal, sells first); the show judge will determine the final sale order.