

Beef Cattle Terminology

Like most businesses, the cattle business has a language all its own. Following are definitions of some of the most common beef cattle terminology.

Accuracy (of selection) - Correlation between an animal's unknown true genetic worth and a calculated estimated genetic worth. An accuracy is an expression of the reliability of an EPD and may range between a low of 0.0 and a high of 1.0.

Adjusted Weaning Weight (adj 205 day wt)- Weight of a calf at weaning, adjusted to a standard 205 days of age and adjusted for the age of the dam.

Adjusted Yearling Weight (adj 365 day wt) - Weight of a calf as a yearling adjusted to a standard 365 days of age and adjusted for the age of the dam.

Artificial Insemination (A.I.) - The procedure for impregnating cows by manually placing semen in the reproductive tract of the female.

Average Daily Gain (ADG) - Calculation of post-weaning gain, figured by dividing the weight gain by the days on feed.

Barren - Sterile female

Birth Weight - Weight taken in the first 24 hours of a calf's life.

Bloom - An inclusive term used to describe the general look of a healthy, clean, lustrous hair coat.

Bred - Applies to the female definitely safe in calf, or pregnant; also used to refer to the mating process.

Breed - A group of animals that have similar external characteristics which are passed on from generation to generation.

Breeder - The owner of the dam of the calf at the time she was mated.

Breeding soundness examination - Inspection of a bull involving evaluation of physical conformation and soundness through genital palpation, scrotal circumference, and testing semen for motility and morphology.

Bulling - a cow in heat.

Bull - Uncastrated male cattle of any age.

By - Designates the sire.

Calf Crop Percent - The percent of cows exposed to breeding which subsequently wean a calf.

Calves - Young cattle of either sex less than one year of age.

Calving - Giving birth, also called "dropping a calf" or parturition.

Carrier - A heterozygous individual having one recessive gene and one dominant gene for a given pair of genes (alleles). For example, an animal with one gene for polledness and one gene for horns will be polled but can produce a horned offspring when mated to another animal carrying the gene for horns.

Castrate - to remove the testes of male cattle.

Chromosome - Chromosomes are long DNA molecules on which genes (the basic genetic codes) are located. Domestic cattle have 30 pairs of chromosomes.

Conformation - The form of an animal as determined by structure, shape and muscling.

Congenital - Acquired during prenatal life. Condition exists at or dates from birth. Often used in the context of congenital (birth) defects.

Contemporary group - A group of cattle that are of the same breed and sex and have been raised in the same management group (same location on the same feed and pasture). Contemporary groups should include as many cattle as can be accurately compared.

Correlation - A measure ranging from -1.0 to +1.0 of how two traits vary together. A positive correlation indicates that as trait A increases, trait B also increases. A negative correlation would indicate that as A increases trait B would decrease.

Cow - Female cattle that have had one or more calves.

Crossbreeding - System of mating two animals of different breeds to increase production efficiency by allowing breed

complimentarity and hybrid vigor. Breed complementarity is combining the desirable traits of two parent breeds, and hybrid vigor (or heterosis) is the increased performance of crossbred calves over the average of their parents.

Crossbred - An animal that has purebred parents or grade parents of different breeds.

Cryptorchid - Male cattle with undescended testes.

Cull - to eliminate an animal of low quality from a herd.

Cutability - Carcass cutout value or yield of saleable meat; sometimes designated as yield grade by meat graders.

Dominance - Dominant genes affect the phenotype when present in either homozygous or heterozygous condition. A dominant gene need only be obtained from one parent to achieve expression.

Dystocia (calving difficulty) - Abnormal or difficult labour causing difficulty in delivering the fetus and/or placenta.

Embryo Transfer (E.T.) - Taking fertilized eggs from a purebred donor cow and transferring them to the uteruses of recipient cows. This allows top-quality cows to produce more than one calf a year.

Environment - All external (non-genetic) conditions that influence the reproduction, production and carcass merit of cattle.

Estrus synchronization - Using synthetic hormones to make a group of females come into heat at the same time. They can then be bred at the same time and all of their calves will be born in a short period, ensuring uniform ages in the calf crop and lower labour requirements.

Expected Progeny Difference (EPD) - An estimate of the expected performance of an animal's offspring, expressed in actual pounds. EPDs can be positive or negative, depending on whether a sire or dam will increase or decrease the measurement in question in its offspring.

F1 - Offspring resulting from the mating of a purebred bull and a purebred cow of different breeds.

Feed Conversion - The amount of feed required to achieve one unit of production (usually a pound of weight gain). The age of the animal and the composition of gain (lean or fat) must be considered when comparing animals for feed conversion or feed efficiency.

Feed Efficiency - The product (usually weight gain) produced per unit of feed consumed.

Finish - The degree of fatness

Fitted - Animal fed, trained and groomed for show or sale.

Founder - A nutritional ailment from overeating; foundered animals become lame with sore feet and excessive hoof growth.

Freemartin - The female member of unlike twins in cattle, showing many male characteristics and incapable of production.

Gene - The basic genetic unit by which characteristics are transmitted from parent to offspring.

Generation Interval - The average length of time between the birth of an animal and the birth of the progeny replacing that animal in the breeding herd.

Genetic Correlation - A correlation between two traits that arises because some of the same genes affect both traits.

Genetic Merit - The genetic worth of an animal for a given trait.

Genotype - Actual genetic makeup or blueprint of an individual determined by its genes or germplasm.

Get - Calves sired by the same bull.

Half-sibs - Individuals having either the same sire or the same dam, but not both.

Heat - The recurrent period of sexual receptiveness in mature cows, when the cow will stand for the bull to breed her; estrus.

Heifer - Female cattle that have not had a calf.

Heredity - The transmission of characteristics from parents to offspring through genes.

Heritability - The proportion of the differences among cattle, measured or observed, that is transmitted to the offspring. Heritability varies from zero to one. The higher the heritability of a trait, the more accurately does the individual performance predict breeding value and the more rapid should be the response due to selection for that trait.

Heterosis (hybrid vigor) - Amount by which measured traits of the crossbreds exceed the average of the two or more purebreds that are mated to produce the crossbreds.

Heterozygous - Genes of a specific pair (alleles) are different in an individual.

Homozygous - Genes of a specific pair (alleles) are alike in an individual.

Inbreeding - When sire and dam are close relatives.

Identification - A permanent indicator of an animal's identity (eg tattoo). Identification must be unique for each animal to allow accurate record keeping and estimation of genetic merit.

Lethal gene - A gene, or genes, that cause the death of an individual which expresses them.

Linebreeding - Selective breeding, sire and dam of some similarity of heredity, but not as closely related as inbreeding; parents of an individual related to a common outstanding ancestor.

Marbling - The small white flecks of fat distributed throughout a cut of beef.

Mean - The average value for a trait.

Multiple Trait Selection - The simultaneous selection for more than one trait. An example would be the consideration of both birth weight and average daily gain when selecting a herd sire.

Nick - When a bull produces outstanding calves from females of a certain line of breeding.

Open - Refers to the non-pregnant female.

Out of - Designates dam.

Pedigree - A chart showing a line of ancestry.

Performance Test - Measure of individual performance, specifically, rate and efficiency of growth and carcass traits.

Phenotype - The visible or measurable expression of a character; for example, weaning weight, post-weaning gain, reproduction, etc. Phenotype is the sum of genotype plus environment ($P = G+E$).

Polled - Cattle that are born without horns.

Prepotent - Above average in ability to transmit individual's desirable traits of offspring.

Purebred - A beef animal whose parents are of the same breed and are recorded with the registry association.

Recessive Gene - Recessive genes affect the phenotype only when present in a homozygous condition. Recessive genes must be received from both parents before the phenotype caused by the recessive genes can be observed.

Registered - An animal whose name, along with the name and number of its sire (father) and dam (mother), has been recorded in the record books of its breed association. The association gives the animal a number, known as a registration number. The association gives the animal a certificate known as a registration certificate showing that the animal has been registered.

Scrotal circumference - A measure of testes size obtained by measuring the distance around the testicles in the scrotum with a circular tape. Related to semen producing capacity and age at puberty of female sibs and progeny.

Selection Intensity - An indication of the percentage of animals which are selected to become parents. Selection intensity increases as the percentage of animals selected decreases.

Service - The act or ability to breed.

Sibs (Full Sibs) - Brothers and sisters of an individual

Springer - Heifer or cow showing signs of advanced pregnancy; near calving.

Stag- Male bovine castrated after sex characteristics are developed.

Steers - Male cattle that were castrated at an early age before any sex characteristics developed.

Straightbreeding - The mating of purebred animals of the same breed.

Supplement - Nutritional additive intended to remedy deficiencies of the diet, such as salt, minerals, protein.

Tattoo - A system of identification of purebred cattle which includes tattoo letters (assigned by the breed association), tattoo serial number and tattoo year letter, For example HER 1E.

Terminal Crossbreeding - The systematic crossing of different breeds or crossbreds where all progeny are marketed.

Trait - Any measurable or observable characteristic of an animal.

Ultrasonic Measurements - Used to estimate carcass and reproductive characteristics, Operates off the principal that sound waves echo differently with different densities of tissue.

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