

## 2025 AGJA Quiz Bowl Statements

\*For intermediate & Senior members; \*\*Senior only

1	People and Places	Harold Bertz is the Executive Director of the American Gelbvieh Association.
2	People and Places	The current AGA Office Operations Coordinator is Margo McKendree.
3	People and Places	Malerie Markley is the AGA Multimedia Coordinator.
4	People and Places	Martha Moenning (pronunciation is Menning) is the current Member and Youth Activities Coordinator.
5	People and Places	The AGA office is located in Lincoln, Nebraska.
6	People and Places	The following is a list of the current AGA Board of Directors: William McIntosh, Justin Taubenheim, Cory Voss, David Larson, Mark Covington, Greg (Bubba) Anderson, Troy Forbes, John Shearer, Dan Warner, Gregg Hartman, Brent Overmiller, Stuart Jarvis, Tom Vehige, Mark Stock and Zach Butler.
7	People and Places	The current AGA President is Dan Warner.
8	People and Places	Buck Wehrbein from Nebraska is the 2025 National Cattlemen's Beef Association (NCBA) President.
9	People and Places	The current members of the AGA Executive Committee are: Dan Warner, President; Stuart Jarvis, Vice President; Brent Overmiller, Secretary; Tom Vehige, Treasurer.
10	People and Places	The current AGJA Board of Directors are Jaycie Forbes, Lincoln Martin, Braxton Murray, Lily Judd, Sadie Morris, Isabel Lowe, Jaylea Pope, Teagan Butterfield, Gentry Warner
11	People and Places	Jaycie Forbes is the current AGJA President.
12	People and Places	Shianna Ocken is the Registry Coordinator.
13	People and Places	Tom Strahm is the current AGA Director of Commercial Marketing.
14	People and Places	The current Gelbvieh Youth Ambassador is Sarah Carroll from Missouri.
15	People and Places	Wayde Pickinpaugh is the DNA Services Coordinator for AGA.
16	People and Places	Wess Anglin is an AGA Commercial Marketing Specialist based in Mississippi
17	People and Places	AGJA advisors are Tana Cooper and Lori Maude
18	People and Places	Sarah Mumm is the current AGA Performance Programs Coordinator.

19	People and Places	Morgan Hauger (pronunciation is HAW-ger) is the current AGA Communications Coordinator.
20	People and Places	Camille Hennerberg is a Registry and DNA specialist for the American Gelbvieh Association.
21	Trivia	Hamburger meat from a single steer will make about 720 quarter pound hamburger patties.
22	Trivia	*During grazing season, a calf deposits more than 531 pounds of manure. This amount includes over 21 million worm eggs.
23	Trivia	Christopher Columbus was a famous explorer who brought cattle from Spain to the West Indies on his second voyage to America.
24	Trivia	The AGA website address is <a href="http://www.gelbvieh.org">www.gelbvieh.org</a>
25	Trivia	Mature cows have four compartments to their stomach.
26	Trivia	Dairy cattle can produce as much as 40 gallons per day of saliva. Saliva serves as an aid in swallowing feed or of a ruminated bolus. It also acts as a buffering agent to control the pH of the rumen.
27	Trivia	A calf is approximately 70% water at birth.
28	Trivia	* Hides are one of the most important by-products of beef. Approximately 144 baseballs or 20 footballs or 18 volleyballs or 18 soccer balls or 12 baseball gloves, or 12 basketballs can be made from the hide of one cow.
29	Trivia	Romans were the first known persons to brand cattle.
30	Trivia	Examples of items made from beef by-products include: candles, crayons, cosmetics, detergent, insulation, plastics, soaps, pet food, piano keys, luggage, wallpaper, insulin for diabetes, car polishes, textiles for car upholstery, footballs, baseballs and basketballs.
31	Trivia	The average American eats 154 burgers each year.
32	Trivia	Beef by-products allow 98% of every fed animal to be utilized in some way.
33	Trivia	One gallon of milk weighs 8.6 pounds.
34	Trivia	On average, a dairy cow produces 90 glasses of milk daily, depending on genetics, feeding practices, and weather.
35	Trivia	It takes 3,000 cowhides to supply the National Football League in footballs for one year.
36	Trivia	The average cow has more than 40,000 jaw movements per day.

37	Trivia	While the U.S. has less than 10% of the world's cattle inventory, it produces nearly 25% of the world's beef supply.
38	Trivia	Using growth hormones (implants) in beef production reduces the land required to produce a pound of beef by 67 percent.
39	Statistics	In 2017, the average age of a beef producer was 58.
40	Statistics	According to Cattle Fax data, the average U.S. steer carcass weight was 916 pounds.
41	Statistics	Cattle consume less than 2/10ths of 1% of all water used in the United States
42	Statistics	The cattle industry is a family business. Eighty percent of the cattle businesses have been in the same families for more than 25 years; 10 percent for more than 100 years.
43	Statistics	In 2024, nearly 1.8 million jobs are in beef cattle production or the meat, beef, and poultry processing industry.
44	Statistics	The global live cattle population amounted to about 1.57 billion head in 2023. India has the most live cattle in the world, followed by Brazil, China, United States and European Union.
45	Statistics	The two largest dairy states are California and Wisconsin
46	Statistics	The beef industry is the single largest segment of American agriculture, which is our nation's largest industry.
47	Statistics	The largest (based on circulation) beef magazine in the United States is <i>Drovers</i> .
48	Statistics	The regions or states that have Gelbvieh associations as of 2024 are Colorado, Missouri, Iowa, Kansas, Kentucky, Mississippi, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Pacific Northwest, South Dakota, Tennessee, Utah/ Idaho, and Virginia.
49	Statistics	As of September 2024, the top ten states for Total (AGA & AGJA) memberships were: Missouri, Kansas, Kentucky, Nebraska, Oklahoma, Tennessee, South Dakota, Iowa, Colorado, North Dakota.
50	Statistics	As of September 2024, the top ten states for AGJA memberships were: Missouri, Kansas, Nebraska, Kentucky, Mississippi, Iowa, Oklahoma, South Dakota, Minnesota, and Ohio.
51	Statistics	In the 2023-2024 year, the top five states of AGA active females are: Kansas, Missouri, Nebraska, Kentucky, and South Dakota.
52	Statistics	The top five states for total animal registrations for the 2023-2024 fiscal year are: Kansas, Nebraska, Missouri, South Dakota, and North Dakota.
53	Statistics	In 2024, the total active animals represented in the annual herd assessment was 32,713.

54	Statistics	The average herd size for AGA members is 38.7 cows
55	Statistics	In 2023-2024 there were 81 NEW Adult Memberships and 77 NEW Junior Memberships for a total of 158 new members.
56	Statistics	Barely 2% of the U.S. population is counted as farmers and ranchers, however, total jobs related to food production account for 10.9% of workers and 16.3% of our gross domestic product.
57	Statistics	Cattle numbers in the U.S. peaked in 1975 at 132 million head. As of January 1, 2025, the U.S. beef cow herd is estimated at 27.9 million head, a 1% decrease from the previous year, marking the smallest herd size in 74 years.
58	Statistics	The Holstein breed has the largest number of registered cattle in the United States.
59	Statistics	The first beef cattle arrived in the United States via Mexico in the 1500s.
60	AGA Policy	Genetic defects can be classified as monitor, warning, or watch status by the AGA.
61	AGA Policy	** All AI sires and Donor Dam must be tested for, or free by parentage of the following genetic conditions: Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus (NH) and Osteopetrosis (OS), Developmental Duplication (DD).
62	AGA Policy	Any abnormalities in Gelbvieh cattle should be reported to the AGA Executive Director by telephone as soon as discovered. The AGA staff may ask the caller or their veterinarian to complete an Abnormal Calf Report.
63	AGA Policy	If a breeder changes the name on an animal, the herd prefix does not and cannot be changed; After progeny have been recorded to a sire and/or dam, you cannot change the name of that sire and/or dam.
64	AGA Policy	When submitting calving information to the AGA, three requirements must be met to place calves in the same contemporary group. These are: birth within 90 days, same sex, same user-defined management group code. Other criteria are premise ID, service type, birth type (single or twin).
65	AGA Policy	Information like birth weight, weaning weight, yearling weight and other information on cattle is submitted to the AGA to be processed.
66	AGA Policy	The American Gelbvieh Association allows only replication cell cloned animals to be eligible for registration.
67	AGA Policy	As of December 2016, cell-donor animals must be tested with the GGP-100K and for all monitored genetic conditions.

68	AGA Policy	The International Year Code system uses letters of the alphabet to indicate the year of an animal's birth. The letters I, O, Q, and V are omitted from the system.
69	AGA Policy	The International Year Codes for this year and the next three years are as follows: 2025-N, 2026-P, 2027-R, 2028-S
70	AGA Policy	Herd Assessments are paid annually by Gelbvieh breeders on breeding age females (13 months or older as of January 1). These assessments are due in the AGA office March 15th of each year.
71	AGA Policy	The AGA considers individuals with at least 81.6% Gelbvieh blood to be purebred Gelbvieh. The maximum % Gelbvieh for a non-fullblood Gelbvieh animal is 99.9%
72	AGA Policy	When figuring the contribution of percentage Gelbvieh to their offspring, Gelbvieh parents that are 91.1% to 99.9% Gelbvieh will contribute 50% Gelbvieh to their offspring.
73	AGA Policy	To receive the Balancer trademark, animals must be 25%-75% Gelbvieh, 25%-75% Angus, or Red Angus and no more than 12.5% of a third breed. Both parents must be registered within their respective breed.
74	AGA Policy	For progeny born after Jan. 1, 2016, all sires of pasture exposed calves (natural sires) must have a GGP-100K panel on file with AGA.
75	AGA Policy	A.I. sires must be DNA typed ( <b>GGP-100K</b> ), parent verified, tested for, or free by parentage, for all monitored genetic conditions, and have an A.I. Permit on file before any offspring can be registered, even if the A.I. Sire is used only within the owner's herd.
76	AGA Policy	Balancer is a registered trademark of the AGA that describes a registered hybrid composed of Gelbvieh genetics with Angus or Red Angus genetics, and not more than 12.5% unknown.
77	AGA Policy	An External Donor Dam is female that is not registered with the AGA but is registered with another breed association.
78	AGA Policy	The Dam of Merit honors cows that have produced at least three calves with all weaning information reported to the AGA. A Dam of Distinction has met the same requirements but has produced eight calves or more. Furthermore, to be honored she must still meet the strict qualifications requiring breeders to place selection pressure on early puberty and conception, regular calving intervals, and above-average weaning weights.
79	AGA Fees	To register cattle with the AGA, individuals must have an active membership AND have paid annual Herd Assessment dues.
80	AGA Fees	AGA members receive a free subscription to Gelbvieh World magazine.

81	AGA Fees	The Herd Assessment rate is \$30.00, yearly, for females over 13 months of age, as of January 1 of each year and is due on March 15 each year.
82	AGA Fees	Animal transfers are free for AGA and AGJA members. The cost of an animal transfer for a non-member is \$20.00 per animal.
83	AGA Fees	A one-year subscription for Gelbvieh World is \$40.00.
84	AGA Fees	Members have 30 days to pay their bill before their account becomes locked.
85	AGA Fees	Dams that are not registered with the American Gelbvieh Association (Angus, Red Angus, Simmental, etc.) will be charged a \$30 herd assessment fee if a breeder would like to register the calves with the AGA.
86	AGA Registration	If an AGA member submits registrations or data using the paper form method, there is a \$2.00 cost per transaction per head. Using AGA's Online Registry System eliminates this fee.
87	AGA Registration	The AGA defines a breeder as the owner of the dam, at the time of conception, of the animal being registered.
88	AGA Registration	*An A.I. permit is required for all sires used in A.I. that were born after January 1, 1989. The cost is \$50.00.
89	AGA Registration	When registering cell-cloned animals, the suffix "ETN" shall be added to the names of offspring resulting from cloning or other advanced reproductive technology.
90	AGA Registration	**Through DNA testing or pedigree, a homozygous black or homozygous polled animal will be identified in one the following classifications: <ul style="list-style-type: none"> <li>• DNA verified, denoted by (-D). An animal that has been DNA tested homozygous for the given trait.</li> <li>• Presumed by pedigree, denoted by (-P). DNA testing or homozygous status in the ancestry of an animal that is parent-verified to both sire and dam dictates that the animal is homozygous for a given trait, but the animal itself has not been tested for the given trait.</li> <li>• Registered fullblood Angus animals will be presumed homozygous black and homozygous polled. Registered 1A Red Angus will be presumed homozygous polled.</li> </ul>
91	AGA Registration	The Southern Balancer is a Gelbvieh heat tolerant composite with at least 25 percent Gelbvieh and 6.25- 50 percent Bos indicus breeding.
92	AGA Registration	DigitalBeef is the online program Gelbvieh breeders use to keep track of animal records and exchange data electronically with the AGA. It is owned by 701X.
93	AGA Registration	To change the name of an animal you have purchased you will need to get the permission of the person who registered it.

94	AGA Registration	Calf registration can be submitted to the AGA via traditional paper forms and AGA's Online Registry System
95	AGA Registration	*On the back of Registration Certificates is a transfer form that can be used as an affidavit to transfer ownership. This can also be done online. Ownership can be transferred at any time.
96	AGA Membership	A herd prefix is a breeder's choice of 3 or 4 letters used to tattoo animals produced in his operation.
97	AGA Membership	To be considered an active AGA member, you must pay two items annually: your dues and your herd assessments. Lifetime AGA members don't pay dues each year but must pay herd assessments to be active.
98	AGA Membership	*If a Gelbvieh female is removed from the Herd Assessment Inventory, the cost to reactivate her includes that year's Herd Assessment, plus the corresponding late fees, for each year the cow has been off the inventory.
99	AGA Membership	The age requirement for membership in the AGJA is birth through 21, as of January 1, of the current year.
100	AGA Membership	To show cattle at an AGJA-sponsored regional or national show, a member must be at least 8 years old by January 1 of that year.
101	AGA Membership	An AGA membership fee is \$130 and includes a subscription to <i>Gelbvieh World</i> .
102	Organizations	MARC stands for Meat Animal Research Center.
103	Organizations	USDA refers to the United States Department of Agriculture.
104	Organizations	NCBA stands for National Cattlemen's Beef Association, and it is a member organization representing U.S. beef producers.
105	Organizations	*The Cattlemen's Beef Promotion & Research Board funded a "muscle profiling" study that catalogued 39 traditionally underutilized chuck and round muscles. This research increased the value of chucks and rounds to beef processors.
106	Organizations	The proceeds from the \$1.00 per head Beef Check-off is used for beef promotion, research, consumer, and industry information. These funds are administered by the Cattlemen's Beef Promotion & Research Board and the state beef councils.
107	Organizations	National Cattlemen's Beef Association is commonly referred to as NCBA
108	Organizations	R-CALF stands for the Ranchers and Cattlemen's Action Legal Fund. The national R-CALF headquarters is in Billings, Montana.
109	Organizations	YBIC stands for the Youth Beef Industry Congress.
110	Organizations	BIF stands for Beef Improvement Federation and was chartered in 1968.
111	Organizations	The primary purpose of the BIF is to develop procedures for evaluating breeding value of beef animals.

112	Organizations	Cattle-Fax, located in Centennial, Colorado, is a market reporting organization that supplies information on market outlook and market inventory.
113	Organizations	The Federal Meat Grading Service was established in 1925.
114	Organizations	APHIS is the Animal and Plant Health Inspection Service.
115	Organizations	The headquarters for the National Cattleman's Beef Association (NCBA) is in Centennial, Colorado.
116	Organizations	The Food and Drug Administration, FDA, is responsible for protecting the public health by ensuring the safety efficacy and security of human and veterinary drugs, biological products, and medical devices.
117	Organizations	The American National CattleWomen's Inc. (ANCW) is a voice for women who share a passion for the beef community with a focus on beef promotion, education and legislation.
118	Organizations	CDC (Centers for Disease Control and Prevention) is a federal agency headquartered in Atlanta, Georgia, plays a critical role in investigating and controlling disease outbreaks at home and abroad.
119	Organizations	The Beef Quality Assurance (BQA) program was created to bring beef producers together to produce safe, wholesome beef that provides a great beef experience every time. BQA recommends management guidelines to produce healthier beef products.
120	Organizations	**The U.S. Roundtable for Sustainable Beef (USRSB) is a multi-stakeholder initiative developed to advance, support and communicate continuous improvement in sustainability of the U.S. beef value chain. The USRSB is comprised of the following five constituencies: producers, allied industry, packers/processing, retail/foodservice and civil society.
121	Organizations	The U.S. Meat Export Federation (USMEF) works to create new opportunities and develop existing international markets for U.S. beef, pork, and lamb.
122	Organizations	The <i>Gelbvieh World</i> magazine is a member of LPC, Livestock Publications Council.
123	Food Safety	Hazardous Analysis Critical Control Points (HACCP) was originally established in 1959 to ensure the safety of food for the astronauts in the NASA program.
124	Food Safety	"USDA inspected beef" means that the beef has undergone a mandatory inspection by the USDA's Food Safety and Inspection Service (FSIS) to ensure it is safe, wholesome, and properly labeled, guaranteeing it's free from disease and safe for consumption.
125	Food Safety	Irradiation is the process of exposing food to a controlled amount of radiant energy to kill harmful bacteria, parasites, insects, and fungi.

		Irradiation increases shelf life, reduces spoilage, and removes insects from fruit.
126	Food Safety	The "Fight Bac!" campaign has four simple steps to food safety. 1. Wash hands and surfaces often. 2. Don't cross contaminate 3. Cook to proper temperatures. 4. Refrigerate promptly.
127	Food Safety	Inspection of beef carcasses by USDA is mandatory, however grading (which evaluates quality and yield) is a voluntary program requested by meat producers or processors.
128	Food Safety	The three keys to eliminating most of the food borne illnesses are: proper handling, storage and preparation.
129	Food Safety	Bacteria multiply rapidly at room temperature. Most food borne illness-causing bacteria do not grow well at refrigerator temperatures (below 40 degrees F).
130	Food Safety	According to the Meat Institute, the incidence of E. coli O157:H7 in ground beef samples tested by USDA is 0.5%.
131	Food Safety	The USDA recommends cooking hamburgers and ground beef mixtures such as meat loaf to 160 degree F (71.1 degree C) as measured with a food thermometer.
132	Animal Health	The term "scour" means persistent diarrhea.
133	Animal Health	The disorder characterized by gas distention of the rumen as seen on an animal's left side is bloat.
134	Animal Health	The condition "founder" or laminitis refers to inflammation of the hoofs internal connective tissue and can be caused by an animal eating too many carbohydrates such as grain, hay, or lush spring pasture. Large and/or overweight animals are more susceptible to this condition.
135	Animal Health	* Bangs is the term cattlemen use for the disease Brucella abortus or brucellosis.
136	Animal Health	The most common viral causes of respiratory disease are bovine respiratory syncytial virus (BRSV), infectious bovine rhinotracheitis (IBR), parainfluenza 3 virus (PI3v) and bovine viral diarrhea (BVD) types 1 and 2.
137	Animal Health	Viruses that commonly cause scours in calves are rotavirus, coronavirus and E. coli.
138	Animal Health	Modified-live (ML) vaccine contains whole viruses or bacteria that have been altered so that they can't cause clinical disease but can still infect and multiply within the animal to help stimulate immunity.
139	Animal Health	Three common administration routes for vaccines include intranasal, subcutaneous and intramuscular.
140	Animal Health	Bovine Viral Diarrhea is abbreviated BVD.

141	Animal Health	<p>*Persistently Infected (PI-BVD) cases can be identified through ear tissue samples. Bovine viral diarrhea virus persistent infection, can occur when a naïve, or improperly vaccinated, pregnant cow is exposed to noncytopathic BVD</p> <p>Types 1 and 2 viruses between 25 to 120 days of gestation when the immune system of the fetus is unable to respond or fight off the infection and programs the virus as part of itself. This results in the calf having a persistent infection where it can shed that virus its entire life.</p>
142	Animal Health	Clostridial vaccines are commonly call 7-way or 8-way vaccines depending on how many clostridium types are in the vaccine.
143	Animal Health	* Overeating disease is more properly known as Enterotoxemia. It is caused by toxins from strains of bacteria called <i>Clostridium perfringens</i> Types C and D.
144	Animal Health	Infectious Bovine Rhinotracheitis is abbreviated IBR and is commonly known as red nose.
145	Animal Health	The mineral most often linked to grass tetany is Magnesium.
146	Animal Health	* Brucellosis, anaplasmosis, leptospirosis, BVD, IBR, and vibriosis can cause abortion in cattle.
147	Animal Health	An inactivated vaccine or killed vaccine is a vaccine consisting of virus particles, bacteria or other pathogens that have been grown in culture and then inactivated or killed to lose disease-causing capacity.
148	Animal Health	Ringworm is caused by a fungus and is transmittable from cattle to humans.
149	Animal Health	Lockjaw is the common name for tetanus.
150	Animal Health	Cattle Grubs are larvae of the Heel Fly.
151	Animal Health	The average rectal temperature of beef cattle is 101.0-101.8 degrees F.
152	Animal Health	* White Muscle Disease is caused by a deficiency of vitamin E, selenium, or both.
153	Animal Health	* As a rule, cows that have retained placentas at calving also have more breeding problems.
154	Animal Health	*Pinkeye is the common name for the disease "infectious bovine keratoconjunctivitis".
155	Animal Health	Warts are contagious to other calves.
156	Animal Health	* Most pieces of hardware ingested by cattle settle in the reticulum or second stomach.
157	Animal Health	**The four most common classes of cattle antibiotics are: macrolides, beta-lactams, phenicols and fluoroquinolones.
158	Animal Health	Mastitis is the broad name used to describe udder infections or disease.

159	Animal Health	Within the first 30-60 minutes after calves are born, they should receive colostrum.
160	Animal Health	Scours and respiratory pneumonia are the two diseases that cause the greatest loss in young calves.
161	Animal Health	After the first 12 hours of life, a calf cannot absorb enough antibodies due to rapid changes in the digestive system.
162	Animal Health	When a cow is made to swallow a magnet, she is being treated for hardware disease. Hardware disease is when a beef animal swallows an item such as wire, nails, or other metal objects potentially causing injury to internal organs.
163	Animal Health	White blood cells help protect the body from disease and infection.
164	Animal Health	* Cows and heifers should be vaccinated for BVD at least 30-60 days before breeding to help protect them and their future pregnancy from persistent infection with BVD.
165	Animal Health	Scours in calves causes rapid dehydration, loss of essential body chemicals and the build-up of acid.
166	Animal Health	* Blue tongue is a viral disease that infects cells lining the blood vessels in the muzzle, lips, tongue, feet, and skin, causing swelling and inflammation. BTV infection occurs in both wild and domestic ruminants/camelids from the bite of a Midge, which is like a Sand Fly.
167	Animal Health	The best age to dehorn a calf is from one day to 3 months.
168	Animal Health	*For modified-live vaccines the antigens are lyophilized, or freeze dried, for stability and reconstituted with diluent (dill-U-ent) before administration.
169	Animal Health	*Diluent (dill-U-ent) is the liquid mixed with a lyophilized (freeze-dried) vaccine in order to reconstitute the lyophilized vaccine and provide the final vaccine for administration. It may be a sterile liquid or a liquid composed of specific antigens.
170	Animal Health	Heifers should be vaccinated for Brucellosis between 4-10 months of age and are given permanent identification with an official Brucellosis ear tag and ear tattoo.
172	Animal Health	A producer can improve injection-site quality by administering products in the neck region, avoiding intramuscular (IM) injections whenever other labeled routes are available.
173	Animal Health	Minimum biosecurity measures include not having visitors in livestock areas, pens, and barns unless it is necessary; parking vehicles on paved or concreted area away from production sites to avoid contact with dirt, mud, or manure, and to wash hands with soap and water.
174	Animal Health	Symptoms of serious diseases include sudden, unexplained death loss in the herd or flock, severe illness affecting a high percentage of animals, or large numbers of animals suddenly going off feed.

175	Animal Health	*The four most common bacterial causes of respiratory disease in cattle are: <i>Mannheimia haemolytica</i> , <i>Mycoplasma bovis</i> , <i>Pasteurella multocida</i> and <i>Histophilus somni</i> .
176	Animal Health	*Fecal Egg Count Reduction Test (FECRT): is a method to measure the efficacy of parasite control products. A fecal sample is taken on an animal, and then the animal is treated with a parasite control product. A fecal egg count is done on the initial sample. In 14 to 21 days, another fecal sample is taken, and an egg count is completed. If a 90% or more reduction of egg count is accomplished, a product is effective. Less than 90% indicates a level of resistance to product ingredients.
177	Animal Health	*Johne's Disease comes from bacteria that infect the intestine, which leads to prolonged diarrhea, poor digestion, and excessive weight loss. Typically found in calves but doesn't become prevalent until cattle are 2-5 years of age. Johne's can spread through manure or milk.
178	Animal Health	Foot rot occurs mostly with adult cattle and becomes more prevalent during wet summer and fall months. Bacteria gain entrance through lesions on the lower part of the foot enters the lower part of the foot. Wet manure and mud can soften the skin between the dewclaws and permit infection. Symptoms include lameness and a moderate fever. Treated animals should be kept on a dry surface until recovered.
179	Animal Health	Bloat is a form of severe indigestion marked by a collection of gas in the rumen that the animal is unable to expel. Visual signs of bloated cattle include distension of the left side of the animal; discomfort as indicated by stomping of feet or kicking of belly, labored breathing, frequent urination and defecation, and sudden collapse.
180	Animal Health	Grass Tetany is a disease of cattle and sheep, caused by a mineral imbalance (magnesium) while grazing lush pasture. Also known as wheat pasture poisoning, symptoms include uncoordinated gait, convulsions, coma, or death.
181	Reproduction	A cow is "bulling" when she tries to ride other cows or stands while cows try to ride her.
182	Reproduction	Estrus or heat is the period in which a female will partake in mating.
183	Reproduction	Another term for estrus is "heat".
184	Reproduction	A cow in continuous heat due to cystic ovaries or other defects caused by hormonal imbalance is referred to as a "buller."
185	Reproduction	Estrous synchronization is the use of hormones to cause a group of cows to come into heat or estrus at the same time.

186	Reproduction	Synthetic prostaglandin (lutalyse) products can be used for heat synchronization or inducing abortion in beef cattle if they are pregnant.
187	Reproduction	Estrous synchronization with prostaglandin works only in cycling cows.
188	Reproduction	If you have an outstanding female and you want to have a herd like her as quickly as possible, you could use embryo transfer.
189	Reproduction	A donor cow provides the embryo for embryo transfers. Donors are typically flushed on Day 7 of a pregnancy.
190	Reproduction	A recipient cow receives an embryo and carries it through its development until the calf is born. A recipient cow will typically gestate an embryo transfer calf seven days less than average.
191	Reproduction	To artificially inseminate (A.I.) a female you need the following equipment: A.I. gun, semen, shoulder-length gloves, semen straw cutter, thermometer, thaw box or thermos with warm water, tweezers, paper towels, and lubricant.
192	Reproduction	Liquid Nitrogen is used in semen tanks to keep the semen frozen.
193	Reproduction	Semen tanks should be stored in a well-ventilated, but protected area to keep the tank dry and out of the sun. It's best to keep the tank on a pallet or on boards to keep it off the ground to prevent rust and corrosion. Weekly or monthly checks of the liquid nitrogen levels may be necessary to maintain the proper storage climate for the semen.
194	Reproduction	Most Gelbvieh heifers are ready to breed between the ages of 12-14 months.
195	Reproduction	The time span that a cow will accept a bull's services is approximately 6-14 hours.
196	Reproduction	*The synchronization of heifers and cows can involve injections of gonadotropin-releasing hormone (GnRH) or prostaglandin, the feeding of melengestrol acetate (MGA), or EAZI-breed CIDRs in a recommended protocol from a veterinarian.
197	Reproduction	A barren cow is a sterile female.
198	Reproduction	An open cow should come into heat every 18-21 days.
199	Reproduction	When a breeder says a cow is "heavy" he means she is in the last trimester of her pregnancy.
200	Reproduction	A breeding soundness exam can be used to check a bull's live sperm count, motility, and sperm abnormalities as well as a bull's scrotal circumference and parts of the reproductive tract.
201	Reproduction	A mature bull can safely breed 25-35 cows. A yearling bull should be limited to 15-25 cows.
202	Reproduction	Cryptorchid refers to male cattle with one or both testicles undescended.
203	Reproduction	When a vet says a cow is "safe-in-calf" it means she is pregnant.

204	Reproduction	Gestation length is defined as the period a female carries her calf in utero or the duration of pregnancy. Most exotic breeds have an average gestation length of approximately 287 days.
205	Reproduction	The sperm that fertilizes an ovum determines the sex of a calf through the contribution of an X or Y chromosome. A female has two X chromosomes, while a male has an X and a Y chromosome.
206	Reproduction	The sire determines the sex of the calf.
207	Reproduction	Chromosomes are present in the nucleus of each body cell and carry the hereditary material called genes.
208	Reproduction	All inherited characteristics are contained in the fertilized egg (embryo).
209	Reproduction	Relaxin is the hormone that acts to widen the birth canal before parturition.
210	Reproduction	** Fimbria (infundibulum) is the thin membranous structure at the end of the oviduct, which partially covers the ovary.
211	Reproduction	A follicle is a structure on the ovary that is the source of the egg at ovulation.
212	Reproduction	The major function of the scrotum of a bull is to regulate temperature of the gonads or testicles.
213	Reproduction	First calf heifers generally have more difficulty calving than mature cows.
214	Reproduction	Testosterone is the hormone responsible for male behavior and sex drive.
215	Reproduction	Gomer is the term used for a bull that is used to detect heat but is incapable of settling cows.
216	Reproduction	Pelvic size and size of calf are primary factors that affect how easily a female can have a calf or give birth.
217	Reproduction	Underfeeding heifers during their first year of life will delay their first breeding.
218	Reproduction	* Selecting bulls with high calving ease & low birth weight EPDs for use as sires can help reduce calving difficulty in heifers.
219	Reproduction	* About 12 hours after the end of standing heat ovulation occurs.
220	Reproduction	* Fertilization usually occurs in the oviduct of the cow's reproductive tract.
221	Reproduction	Parturition is the process of giving birth.
222	Animal Science	Almost 80% of dairy producers in North America use artificial insemination (AI) to breed cattle, compared to only 4% of beef producers. In the Gelbvieh breed, approximately 24% of the calves registered are the result of AI.
223	Animal Science	*In mapping the bovine genome, researchers used the complete sequence of genomes from a single Hereford cow and comparative genome sequences for six more breeds to complete their project.

224	Animal Science	**Neuropathic Hydrocephalus (NH) is a lethal genetic defect. NH calves are born near term and have 25- 35-pound birth weights. The cranium is markedly enlarged (volleyball to basketball sized). The bones of the skull are malformed and appear as loosely organized.
225	Animal Science	**Arthrogryposis Multiplex (AM) is a lethal genetic defect that results in small, thin calves, born dead, with a twisted spine and often rigid hind limbs. The genetic disorder, also referred to as Curly Calf Syndrome, is inherited as a simple recessive trait.
226	Animal Science	**Tibial Hemimelia, known as TH, and Pulmonary Hypoplasia with Anasarca, known as PHA, are genetic defects. TH is found primarily in cattle of Shorthorn origin. However, Maine Anjou, Chianina and Simmental populations have individuals which can pass this gene.
227	Animal Science	**Syndactyly (Mule Foot) is a genetic defect that results in the toes of hoof being fused together. The issue can range from one hoof to all four hooves affected.
228	Animal Science	**Osteopetrosis (Marble Bone Disease) is a genetic defect resulting in calves born 10-30 days premature. Typically, calves are born dead, but if born alive will die within 24 hours after birth. Calves possess a short lower jaw and impacted molars.
229	Animal Science	**Hypotrichosis (Hairlessness) is a non-lethal genetic defect resulting in partial to almost complete lack of hair. Affected calves are often born with very short, fine, kinky hair that falls out leaving bare spots or areas particularly susceptible to rubbing.
230	Animal Science	* Cortisone, a drug used to relieve pain in humans, is made from the gallbladder of a cow.
231	Animal Science	* Growth hormone is technically called somatotropin.
232	Animal Science	* Growth hormone is secreted from the anterior pituitary gland.
233	Animal Science	A gene is a biological unit of heredity contained in a chromosome, which controls the inheritance of one or more characteristics. Simply stated, it's the unit of heredity.
234	Animal Science	Genetics is the name for the study of the laws of inheritance.
235	Animal Science	Heritability is defined as the portion of the phenotypic differences that are due to genetic variation. For a trait that is 40 percent heritable, 40 percent of the variation in the contemporary group is due to genetics and 60 percent is due to environment.
236	Animal Science	Heritability is the portion of the phenotypic differences between animals that is due to heredity.
237	Animal Science	Cattle cells contain 30 chromosome pairs.
238	Animal Science	Birth weights in cattle are moderately to highly heritable.
239	Animal Science	An animal is said to be heterozygous for a trait if it carries one dominant and one recessive gene for that trait.
240	Animal Science	* Some traits in beef cattle are more heritable than others. For example, most growth traits are moderately heritable. Most

		reproductive traits are lowly heritable because environmental factors play more important role in the expression of the trait than
241	Animal Science	To verify parentage of a calf, each of the calf, its sire and its dam must have a parentage profile of DNA markers and then the markers of the calf are compared to the parents.
242	Animal Science	* BSE stands for bovine spongiform encephalopathy. Its more common name is Mad Cow Disease.
243	Animal Science	Genotype is the genetic make-up of an animal.
244	Animal Science	Phenotype is the physical appearance of an animal due to genetic and environmental influences.
245	Animal Science	Double muscle is the common name for genetic muscular hypertrophy in beef cattle.
246	Animal Science	Stomach or intestinal worms can be controlled by utilizing a parasite control product by injection, pour-on, oral drench or feed through.
247	Animal Science	Sanitation is the best prevention for flies.
248	Animal Science	Grubs are small legless insects that begin as eggs on a calf's leg, move through his body and out his back.
249	Animal Science	Lice and flies are the most common external parasites in cattle.
250	Animal Science	Late winter or early spring, when it is cold, is the best time for lice control.
251	Animal Science	The face fly causes economic losses by transmitting pinkeye.
252	Animal Science	The immature or larval stage of a fly is a maggot.
253	Animal Science	Horn flies affect beef cattle by sucking their blood.
254	Animal Science	Face flies and horn flies develop as maggots in freshly deposited cattle manure.
255	Animal Science	Lice can cause anemia in cattle by sucking blood out of the animal.
256	Animal Science	The common name for <i>Ostertagia ostertagi</i> is brown stomach worms.
257	Animal Science	The hormone oxytocin primarily causes milk let-down.
258	Animal Science	* Pheromones are any chemical communication between individuals.
259	Animal Science	When a cow is frightened the hormone Epinephrine (adrenaline) is likely to be secreted.
260	Animal Science	FMD stands for Foot and Mouth Disease, a highly contagious disease that causes blisters on the feet and muzzle of cloven-hoofed animals.
261	Animal Science	*Leptin is a protein produced by fat tissue that research links to an animal's feed intake, energy metabolism and rate of fat deposition. A higher level of leptin generally means the animal possesses a greater quantity of fat and marbling.

262	DNA Testing	A DNA profile with DNA SNP markers is a method of individual identification and parentage verification. The AGA switched to DNA testing for parent verification beginning July 2009.
263	DNA Testing	*Calpain is a naturally occurring enzyme that contributes a role in beef tenderness by weakening muscle fibers postmortem (after death).
264	DNA Testing	*Calpastatin blocks calpain and the role it plays in postmortem tenderization.
265	DNA Testing	Current DNA tenderness tests, check for the presence of calpastatin and calpain.
266	DNA Testing	Neogen DNA is the primary genomic testing lab for the AGA.
267	DNA Testing	*SNP is a single nucleotide polymorphism. A SNP acts as a pointer for the presence of a gene.
268	Nutrition	Examples of protein feeds are soybean meal, alfalfa meal, cottonseed, and alfalfa hay.
269	Nutrition	Amino acids are the building blocks of protein.
270	Nutrition	Roughage refers to a bulky feed that is low in energy and high in fiber such as hay.
271	Nutrition	Concentrates, known as supplements, are a classification of feedstuffs that are high in energy and low in fiber. Examples of concentrate feed grains include corn, milo, wheat, oats, barley and soybeans/soybean meal.
272	Nutrition	Young cattle use most of their feed for growth and maintenance.
273	Nutrition	Mature livestock use most of their feed for maintenance and reproduction, rather than growing.
274	Nutrition	At least 80-85% of the nutrients consumed by cattle come from non-grain sources – feedstuffs not edible by humans such as grass, roughage, food processing by-products and crop residues like corn stalks.
275	Nutrition	In general, you should start feeding a steer for show at 6-8 months of age.
276	Nutrition	Progesterone, estrogen, vitamin D, and aldosterone are all hormones synthesized from cholesterol.
277	Nutrition	Net energy is defined as the energy remaining after the deduction of digestive losses, gas losses, urinary losses, and the work of digestion.
278	Nutrition	Vitamin A is required for the functioning of the eye in the dark.
279	Nutrition	A vitamin D deficiency in calves results in rickets.
280	Nutrition	Cattle usually receive adequate quantities of Vitamin D by synthesizing it in their own bodies during exposure to direct sunlight or from sun cured hay.
281	Nutrition	** A cattle liver functions chiefly as an aid to the alimentary canal in nutrient digestion.

282	Nutrition	The primary digestive activity that occurs in a cow's rumen is feedstuff fermentation.
283	Nutrition	Phosphorus has been called the "master mineral" because it is involved in practically all the metabolic processes of the body.
284	Nutrition	Rennin is the enzyme in a calf's stomach that causes milk to form a curd.
285	Nutrition	* Surplus Vitamin A is stored in the liver for up to 90 days.
286	Nutrition	Colostrum is the first milk of a fresh cow. Colostrum is important to a calf because it provides protection against disease and is high in vitamins, minerals, energy, and antibodies.
287	Nutrition	Lactose is the chemical name for milk sugar.
288	Nutrition	Maintenance, growth, lactation, and reproduction are the four main divisions that feed usage can be categorized into.
289	Nutrition	Vitamin A is the most important vitamin for a breeding beef animal.
290	Nutrition	Salt and minerals are normally fed free choice to beef cows on pasture.
291	Nutrition	Energy, protein, vitamins, minerals, and water are the 5 primary nutrients.
292	Nutrition	Bacteria and other microbes of the rumen enable cattle to digest cellulose.
293	Nutrition	Overfeeding corn to cattle not used to a concentrate feed can cause founder or acidosis.
294	Nutrition	Drought is likely to increase nitrate, a toxic factor, in corn silage.
295	Nutrition	Calcium is most likely to be deficient with cattle maintained on a high concentrate diet.
296	Nutrition	High concentrate feeding is associated with liver abscesses.
297	Nutrition	Growth-promoting implants affect feed efficiency.
298	Nutrition	*Protein in feed not digested by microbes of the rumen passes to the lower gut for digestion as bypass protein.
299	Nutrition	Distiller's grains; Brewer's grains; corn gluten meal and dehydrated alfalfa are high in by-pass protein.
300	Nutrition	Nutrient requirements for the pregnant beef cow are highest during the last third of pregnancy.
301	Nutrition	It is important to change a cow's feed slowly to give rumen bacteria time to adapt to a new diet.
302	Nutrition	Salt is iodized to supply iodine, which helps control goiter, a condition of the thyroid.
303	Nutrition	TDN stands for total digestible nutrients.
304	Nutrition	Calcium and phosphorus are minerals essential for proper bone development.
305	Nutrition	In drought stunted corn, the largest amounts of nitrate will be found in the stalks.
306	Nutrition	Feed is digested in the rumen by bacteria and protozoa.

307	Nutrition	* High nitrate feeds can be a problem. If you are feeding high nitrate feeds, you can also feed high energy feeds, like grain, to help the cow turn the nitrates into protein.
308	Nutrition	Cows will eat less on a hot summer day.
309	Nutrition	Rumination is regurgitation and chewing of the cud.
310	Nutrition	Molasses is a good source of energy, which is used in many feeds.
311	Nutrition	NPN stands for non-protein nitrogen. Urea is a form of nonprotein nitrogen.
312	Nutrition	* Nutrient requirements for finishing cattle are based on 3 factors: the sex and size (weight) of the animal, the level of production (daily gain) and nutrient intake.
313	Nutrition	A feedstuff that has high fiber content would most usually be classified as roughage.
314	Nutrition	Heavy infestation of lice and intestinal worms will cause cattle to be slow gainers.
315	Nutrition	Of the classes of nutrients (vitamins, minerals, proteins, carbohydrates, water, and fats) water is the most economical in almost all cases.
316	Nutrition	Iron, copper, phosphorus, calcium, and magnesium are examples of minerals.
317	Nutrition	White muscle disease is caused by a deficiency of either Vitamin E and/or Selenium.
318	Nutrition	* The total amount of water used in on-farm production of grain fed beef averages 200 gallons per pound of carcass beef.
319	Nutrition	Mature cattle consume 8-15 gallons of water per day.
320	Nutrition	Feed grains are grains that are not suitable for human consumption, but when fed to animals resulting in highly nutritious nutrients for humans.
321	Nutrition	*Cellulose is the most abundant chemical component of plants, and it is the most abundant organic chemical substance on earth. It is indigestible by humans, but from 30 to 80 percent of the cellulosic material eaten by ruminant animals is digested.
322	Nutrition	ZIP is an acronym often used to communicate beef's nutritional value with zinc, iron and protein.
323	Nutrition	An animal unit is a standard measure based on feed requirements, used to combine various classes of livestock according to size, weight, age, and use.
324	Gelbvieh History & Development	Artificial insemination was the technology used to introduce Gelbvieh genetics to the United States.
325	Gelbvieh History & Development	Gelbvieh cattle were first imported into the United States in 1972.
326	Gelbvieh History & Development	Leness Hall of Carnation Genetics, Washington was the person responsible for first importing Gelbvieh semen to the United States.

327	Gelbvieh History & Development	In Germany, Gelbvieh are also called German Yellow.
328	Gelbvieh History & Development	The bull stud that brought the first Gelbvieh semen to the United States was Carnation Farms Breeding Service (Carnation Genetics).
329	Gelbvieh History & Development	Gelbvieh semen was introduced into the United States in 1971.
330	Gelbvieh History & Development	Semen was offered from 4 bulls when the original Gelbvieh semen was imported into the United States. Their names were: Uni, Upat, Universal and Ufa.
331	Gelbvieh History & Development	Gelbvieh cattle originated in the Bavarian area of Germany.
332	Gelbvieh History & Development	Gelbvieh cattle were performance tested in Germany for over 110 years.
333	Gelbvieh History & Development	The first 7/8 Gelbvieh calves born in the U.S. were twins named Miss Sugar and Miss Spice. They were born in 1976 at Green Valley Gelbvieh Ranch in South Dakota.
334	Gelbvieh History & Development	The initials AGA stand for American Gelbvieh Association.
335	Gelbvieh History & Development	The AGA was organized in 1971. The first national Gelbvieh sale was held in 1972. The first national Gelbvieh show was held in Denver in 1977.
336	Gelbvieh History & Development	The first halfblood Gelbvieh calf was born on April 18, 1972 in Claremore, Oklahoma, at the ranch of Dr. Tom Carter. The calf was sired by Ufa.
337	Gelbvieh History & Development	The first issue of Gelbvieh World was published in July/August of 1986
338	Gelbvieh History & Development	The Gelbray breed was developed by crossing Gelbvieh and Brahman.
339	Gelbvieh History & Development	Homer & Dotti Knost, Clinton, Louisiana developed the Gelbray breed.
340	Gelbvieh History & Development	One important result of the infusion of Brahman blood in the Gelbvieh breed by way of Gelbray is the increased heat and insect tolerance.
341	Gelbvieh History & Development	Many Gelbvieh fullbloods are horned, with some instances of the polled trait.
342	Gelbvieh History & Development	In 1982, John Green, Franklinton, Louisiana was the first to produce a Gelbvieh calf that survived the detailed frozen embryo process.
343	Gelbvieh History & Development	The purpose of the American Gelbvieh Association is to develop, promote, improve, record, and register the Gelbvieh breed of cattle through a non-profit, membership corporation composed of cattle breeders who individually share the same purpose.

344	Gelbvieh History & Development	The first AGA president was Gallagher Rule, who also helped start the American Gelbvieh Association.
345	Gelbvieh History & Development	Founding memberships for AGA were \$500.00.
346	Gelbvieh History & Development	The 2024 AGA Hall of Fame Inductee was Leon and Jan Dunn from Kansas.
347	Gelbvieh History & Development	The annual herd summary program was instituted in 1985 to let members report the animals no longer producing in their herds.
348	Gelbvieh History & Development	Dottie Knost and Lori Maude are the only two women to serve as president of the American Gelbvieh Association.
349	Gelbvieh History & Development	*The 5 organizers of AGA were Gallagher Rule, Merle Buss, Mitch Dobson, Homer Knost and Fred Twietmeyer. E. Edd Pritchett wrote the articles of incorporation for the American Gelbvieh Association.
350	Gelbvieh History & Development	The previous sites of the Junior Classic were: 1982 – Fremont, NE; 1983 – Spencer, IA; 1984 – Sioux Falls, SD; 1985 – Shawnee, OK; 1986 – Rapid City, SD; 1987 – Greeley, CO; 1988- Hutchinson, KS; 1989– North Platte, NE, 1990 – Shawnee, OK, 1991 – Gillette, Wyoming, 1992 – Hutchinson, Kansas, 1993 – Kearney, Nebraska, 1994 – Columbia, Missouri, 1995 – Murfreesboro, Tennessee, 1996 – Pueblo, Colorado, 1997 – Wichita Falls, Texas, 1998 – Columbus, Ohio, 1999 – Kearney, Nebraska, 2000 – Springfield, Missouri, 2001 – Rapid City, South Dakota, 2002 – Perry, Georgia, 2003 – Hutchinson, Kansas, 2004 – Stillwater, Oklahoma, 2005 – Greeley, Colorado, 2006 – Sioux Falls, South Dakota, 2007 – Sedalia, Missouri, 2008 – Waynesville, North Carolina, 2009 – Des Moines, Iowa, 2010 – Bryan- College Station, Texas, 2011 – Kearney, Nebraska, 2012 – Chillicothe, Missouri, 2013 – Rochester, Minnesota, 2014 – Sioux Falls, South Dakota, 2015 – Springfield, Ohio, 2016 – Stillwater, Oklahoma, 2017 – Lincoln, Nebraska, 2018 – Waterloo, Iowa 2019- Lebanon Tennessee, 2020- Springfield, Missouri, 2021- Batesville, Mississippi, 2022- Salina, Kansas, 2023 – Huron, South Dakota, 2024 - Woodward, Oklahoma.
351	Gelbvieh History & Development	Past Presidents of AGA are: Gallagher Rule, Don Maskill, Charlie Cooper, Johnny Green, Rod MacLennan, Charles Clark, Dottie Knost, Jerry Mettler, Earl Buss, Ed Kalianoff, Jim Beastrom, Alan Albers, C.K. Allen, Tom Cone, Larry Martin, Rick Soelzer, John Burbank, John Barte Sr., Wayne Roitsch, Bill Wilkinson, Steve Munger, John Carrel, Jay Johnson, Stuart Jarvis, Vaughn Thorstenson, Al Knapp, Jim Beastrom, Mark Goes, Rob Arnold, Neal Pearson, Scott Starr, John Carrel, Dan McCarty, Klint Sickler and Lori Maude.

352	Gelbvieh History & Development	The current members of the “Hall of Fame” are: Leness Hall, Gallagher Rule, Fred Twietmeyer, Merle Buss, E. Edd Pritchett, Johnny Green, Don Maskill, Jim & Loretta Wilson, Bud & Thelma Beastrom, Charles & Carol Cooper, Rod MacLennan, Homer & Dottie Knost, Bill & Georgia Diehl, Jim Baldrige, Earl Buss, Chuck Struthers, Don & Mar Fawcett, Fred & Lee Kummerfeld, Jerry Mettler, Phil VanDervoort, Francis Bradshaw, Phil & Dolores Haglund, Alan Albers, Bobby Myrick, Tony Hayek, Dave Roen, Bill Clark, John Barte Sr., Roger Gatz, Jim & Barb Beastrom, John C. Oswald, Eldon and Kathy Starr, and Jeanette Rankin, John C. Oswald, Charles Clark, Dave & Cindy Judd, Ken Thorstenson, and Al & Mary Knapp, Mitch Dobson, Jim Thomas, Glen Wehner, John & Laurie Burbank, Mark & Patty Goes, and Leon & Jan Dunn.
353	Gelbvieh Traits	Problems with pink eye are limited in Gelbvieh cattle due to good pigmentation.
354	Gelbvieh Traits	The Gelbvieh disposition is best described by the term “docile”.
355	Gelbvieh Traits	Gelbvieh are considered a good maternal breed because of their excellence in the following traits: fertility, mothering, milk production, percent calf crop, weaning weights, disposition, early maturity, pigment distribution.
356	Gelbvieh Traits	A beef producer gains many advantages when he uses Gelbvieh in his program. Among these are excellence in growth rate, milk production, weaning weight, feed conversion, pigment distribution, carcass cutability, disposition, hardiness, and adaptability.
357	Gelbvieh Traits	* According to a survey of commercial cattle producers the four primary advantages of Gelbvieh sired cows are pounds weaned per cow exposed, milking ability, rebreeding ability and temperament.
358	Gelbvieh Traits	* According to a survey of Commercial cattle producers the four primary advantages of Gelbvieh cross feeder calves are growth, muscle, leanness, and temperament.
359	General Cattle Knowledge	In any species of animal, the dam of an offspring is the female parent.
360	General Cattle Knowledge	In any species of animal, the sire of an offspring is the male parent.
361	General Cattle Knowledge	Cows are female cattle that have produced at least one calf.
362	General Cattle Knowledge	Cattle of either sex, under one year of age, are called calves.
363	General Cattle Knowledge	WDA is the abbreviation for Weight per Day of Age.
364	General Cattle Knowledge	When a cattleman says that a cow has “dropped”, he means she has calved.

365	General Cattle Knowledge	A herd sire is a principal breeding bull in the herd.
366	General Cattle Knowledge	When a breeder describes a cow as being “broody” he means that she gives the appearance of being a good mother.
367	General Cattle Knowledge	The paper that lists the sire and dam of a registered animal is the registration certificate.
368	General Cattle Knowledge	Cattle that are genetically hornless are said to be polled.
369	General Cattle Knowledge	When a breeder refers to the bottom side of a pedigree, he is talking about the dam’s ancestry. The top side is the sire’s ancestry.
370	General Cattle Knowledge	In a pedigree, the letters E.T. stand for embryo transfer.
371	General Cattle Knowledge	The most used by-product of beef animals is leather.
372	General Cattle Knowledge	A herd bull battery consists of bulls in service in a herd.
373	General Cattle Knowledge	*A contemporary group can be defined as a group of animals of a similar age, same sex, and similar management.
374	General Cattle Knowledge	Castration refers to the process of removing the testicles.
375	General Cattle Knowledge	Cattle futures markets are used to manage price risk in the cattle business.
376	General Cattle Knowledge	In any species of animal, the word “progeny” means offspring.
377	General Cattle Knowledge	When a breeder says a cow is “open”, he means she is not pregnant.
378	General Cattle Knowledge	“Branded beef” is a merchandising concept providing consumers with a labeled product that is typically more consistent in quality than commodity beef.
379	General Cattle Knowledge	Heifers are female cattle that have not born offspring.
380	General Cattle Knowledge	Dystocia is another term for difficult calving.
381	General Cattle Knowledge	A male bovine animal that has been castrated before sexual maturity is a steer.
382	General Cattle Knowledge	A frame six yearling bull has a 51-inch hip height.
383	General Cattle Knowledge	Ideally a cow should have a calf each year beginning at two years of age.
384	General Cattle Knowledge	Steers and heifers that have been finished for slaughter are referred to as feeder, or fed, cattle.
385	General Cattle Knowledge	A “freemartin” is a sterile heifer born twin to a bull.

386	General Cattle Knowledge	Bull calves, in general, are expected to weigh more at weaning than heifers.
387	General Cattle Knowledge	* The average generation interval in cattle is 4.5 to 6 years.
388	General Cattle Knowledge	* Selection differential is the superiority of parent stock compared to the average of the herd from which they were selected.
389	General Cattle Knowledge	Cattle, sheep, and goats all belong to the same scientific family grouping in classification.
390	General Cattle Knowledge	* Bovidae, meaning hollow horned, is the cattle family classification.
391	General Cattle Knowledge	Cattle were first domesticated in the year 7,000 BC
392	General Cattle Knowledge	Shade and/or cool water are essential for calves in hot weather.
393	General Cattle Knowledge	Loss of weight during shipping is called shrink.
394	General Cattle Knowledge	A normal amount of shrink to expect is 3-6 percent.
395	General Cattle Knowledge	Lactation is the period when a cow is producing milk
396	General Cattle Knowledge	Hip height, age and sex are the 3 pieces of data necessary to calculate frame score.
397	General Cattle Knowledge	Bulls used for breeding purposes should not be implanted with a growth stimulant because it severely retards testicle development.
398	General Cattle Knowledge	For cattle handling chutes, a width of 22 to 26 inches is generally recommended for small- to medium-frame cows, while 18 inches is sufficient for calves. For larger cattle, a chute width of 28 to 30 inches may be preferred.
399	General Cattle Knowledge	Most livestock futures are traded at the Chicago Mercantile Exchange.
400	General Cattle Knowledge	Udder and teat soundness are a concern for several reasons: extra costs, reduced convenience, reduced longevity with injury or mastitis, calf performance may be affected by reduction in milk flow or lower colostrum intake by newborn calves, and heritability.
401	General Cattle Knowledge	Cattle improve grass growth by aerating the soil with their hooves, allowing oxygen to enter the soil.
402	General Cattle Knowledge	Animal Rights is a position taken by those who are against the "exploitation" of all animals for any purpose and believe that animals have legal or moral rights like humans.
403	General Cattle Knowledge	Animal welfare is based on the principles of humane care and use. Believing that animals can and will be used to benefit humans, and the responsibility of use carries certain obligation, such as

		appropriate husbandry, provision of essential food, water, and shelter are practices of good animal welfare.
404	General Cattle Knowledge	Most normal cattle deaths occur in the first 24 hours of life. The leading causes of deaths are slow and difficult births (dystocia), and cold stress (hypothermia).
405	General Cattle Knowledge	Public land is land owned by the local, state, or federal government.
406	General Cattle Knowledge	A grazing fee is a payment made by ranchers to the government for the right to graze livestock on public land areas for a specified length of time.
407	General Cattle Knowledge	Rangeland is land on which the native vegetation is predominantly grasses, grass-like plants, forbs, or shrubs, grazed by wild or domestic animals and is managed as natural ecosystem.
408	Breeds	A breed is described, as a group of animals having a common origin and because of breeding and selection, possess common characteristics such as color, ears, horns, etc.
409	Breeds	Examples of Continental European breeds are: Gelbvieh, Maine Anjou, Blonde d'Aquitane, Charolais, Saler, Simmental, Chianina, Limousin or Braunvieh.
410	Breeds	The new breeds brought about by the Brahman cross are called American breeds. Some examples are: Gelbray, Charbray, Braford, Brangus, Simbrah, Beefmaster, Santa Gertrudis.
411	Breeds	Examples of British (English) breeds are Angus, Hereford, Galloway, Shorthorn, Red Angus, Polled Hereford, South Devon
412	Breeds	Any combination of two or more breeds is a crossbred animal.
413	Breeds	The cattle species called Bos Taurus is generally described as cattle with no hump over the shoulder and neck. Examples include Continental European breeds like Gelbvieh, Limousin, Maine Anjou; and British breeds, Angus, Hereford, and Shorthorn.
414	Breeds	The cattle species called Bos Indicus is generally described as cattle with a hump over the shoulder and neck. Bos indicus cattle are heat tolerant and resistant to ticks and other insects. Bos indicus examples include Nelore, Gir, Guzerat, Nelore, and Brahman.
415	Breeds	* If a purebred (94%) Gelbvieh bull is mated to a cow that is 50% Hereford & 50% Angus, the fractions of each breed the calf would be 50% Gelbvieh, 25% Angus and 25% Hereford.
416	Breeds	An animal that has some Brahman blood is referred to as being "eared".
417	Breeding Systems	Robert Bakewell was a famous man from Great Britain that first practiced line breeding to produce animals of a fixed type.
418	Breeding Systems	The term F1 refers to the first cross of two unrelated pure breeds.

419	Breeding Systems	Another term for hybrid vigor is heterosis.
420	Breeding Systems	A terminal cross is designed to produce a growthy calf from a moderate sized cow. No females are kept for replacement and no bulls are kept for use. All progeny are raised for slaughter.
421	Breeding Systems	In a breeding herd, sires are usually selected based on a combination of things, namely: pedigree, conformation, performance, fertility, eye appeal, progeny, and EPDs.
422	Breeding Systems	Get-of-Sire means calves sired by the same bull.
423	Breeding Systems	If a breeder uses only animals from his/her own herd and doesn't bring in outside genetics, he/she is said to have a closed herd.
424	Breeding Systems	Culling is a process of eliminating low quality animals from a herd.
425	Breeding Systems	Line breeding is a mating system, which concentrates the inheritance of one or more ancestors in the pedigree.
426	Breeding Systems	Inbreeding is mating of closely related animals.
427	Breeding Systems	Crossbreeding is mating of animals from different breeds.
428	Breeding Systems	An animal whose parents are both of the same breed is considered a "straight bred."
429	Exports	Exports add value to underutilized beef cuts that have limited demand in the United States, such as short rib, short plate, liver, or tripe.
430	Identification	The permanent identification number in an animal's ear is a tattoo.
431	Identification	A tattoo can reflect several different things, such as the year the calf was born, calf's parentage, or the sequence as to when a calf was born.
432	Identification	Three types of animal identification include ear tag (RFID or visual tag), freeze brand or hot brand and tattoo.
433	Identification	If an animal has a permanent EID number, a Gelbvieh member can have that number added to the animal's registration. All animals exhibited at the National Gelbvieh Show or the Junior National Show must have an EID tag and that number on their registration paper.
434	Identification	Process verification is the ability to verify whether an animal has received a specific product such as a vaccine or a procedure as claimed by a seller.
435	Identification	Source verification is the ability to verify the source of an animal as claimed by the owner or seller.
436	Identification	NAIS is an acronym for National Animal Identification System. NAIS is a modern, streamlined information system that helps producers and animal health officials respond quickly and effectively to animal disease events in the United States.
437	Identification	One of the goals of NAIS is 48-hour traceback after the discovery of a disease outbreak.

438	Identification	A premises is defined as a location where animals are raised, held, or boarded.
439	Showing	In showmanship, exhibitors are expected to have a show halter, show stick, and scotch comb.
440	Showing	When traveling it's very important to bring calf's registration papers (if available), bill of sale, brand inspection (if you are traveling from a brand inspection area), and health inspection papers.
441	Showing	A blocking chute is a metal or aluminum structure with a head gate used to restrain animal while fitting or clipping.
442	Showing	A show halter is a leather or cable halter used only when showing an animal.
443	Showing	A blower is an electric unit used to dry an animal or to blow out dirt before fitting.
444	Showing	A show box is a wood, aluminum, or plastic box used to store show products and other tools needed at a show.
445	Showing	When you lead an animal in the show ring, you should be on the animal's left side.
446	Showing	A show stick is an instrument used for setting up cattle's feet in the show ring.
447	Showing	In a showmanship contest, the exhibitor is evaluated on their overall ability to effectively present their animal in the ring.
448	Showing	An animal's "bloom" refers to the desirable condition of skin & hair.
449	Consumer Information	* The Food and Drug Administration says that ground beef products should be cooked to an internal temperature of at least 160 degrees, to destroy E. coli or other types of bacteria.
450	Consumer Information	* When comparing the nutrient advantages of a 3-ounce portion of top round steak with a 3-ounce portion of chicken breast, one serving of beef equals 7 chicken breasts to get the same amount of Vitamin B12. One serving of beef equals 3 chicken breasts
451	Consumer Information	May is traditionally the month when beef and the beef industry is recognized.
452	Consumer Information	Beef consumption in the U.S. per person per year is second to poultry.
453	Consumer Information	A three-ounce serving of meat provides substantial quantities of the recommended daily allowance for various nutrients, which include B-vitamins, iron, zinc, and protein.
454	Consumer Information	* A 100-gram serving of lean beef has approximately the same amount of cholesterol as 100 grams of either fish or chicken.
455	Consumer Information	Proteins from all meat are at least 97% digestible and meat fat is at least 96% digestible.
456	Consumer Information	Protein from meat is higher quality (a complete protein) than protein from a plant source (incomplete protein)

457	Consumer Information	GMOs “Genetically Modified Organisms” are organisms that have had their genome modified artificially by genetic engineering.
458	Consumer Information	Meat provides “heme” iron, which is better absorbed by the body than non-heme iron from plant foods.
459	Consumer Information	A ½ cup of cooked dried beans, 4 ounces of tofu, 1 egg, or 2 tablespoons of peanut butter equals 1 ounce of protein.
460	Consumer Information	A study in the Journal of American Dietetic Association found that rinsing and blotting meat with a paper towel can reduce the fat content of cooked ground beef, hamburgers, meatballs, and meatloaf by as much as 50 percent.
461	Consumer Information	Demand of prepared meals continues to increase, since today’s women work an annual average of 233 hours more than they did in 1976 and men work an annual average of 100 hours more.
462	Consumer Information	By law, ground beef can contain no more than 30% fat.
463	Consumer Information	Between 40 and 45% of all beef sold today is in ground form. This includes fast food burgers, ground beef purchased in the grocery store and processed meats such as sausages, hot dogs, and lunch meat.
464	Calculations	*Adjusted weaning weight is figured by adjusting the calf's weight at weaning to a standard 205-day weight and adjusting for the age of the dam.
465	Calculations	** The AGA does not use standard Beef Improvement Federation (BIF) age of dam additive adjustment factors to calculate adjusted weaning weights. Instead, the AGA uses a more continuous adjustment formula that considers a dam’s age in days rather than in rounded years.
466	Calculations	ADG is the abbreviation for Average Daily Gain.
467	Calculations	The equation for Weight per Day of Age (WDA) is the animal's current weight divided by its age in days.
468	Calculations	The equation for lifetime Average Daily Gain (ADG) is the animal's current weight minus its birth weight; this is divided by the age in days.
469	Calculations	** Adjusted weaning weight equation: $\text{Adj. 205} = ((\text{Actual Weaning Weight} - \text{Actual Birth Weight}) / \text{Age in days at Weaning}) * 205 + (\text{Birth Weight} + \text{Age of Dam Adjustment})$
470	Calculations	** Adjusted yearling weight equation: $\text{Adj. 365 weight} = ((\text{Actual Yearling Weight} - \text{Actual Weaning Weight}) / \text{Number of days between weights}) * 160 + \text{Adj. 205-day weight}$
471	Calculations	* The three things that actual weaning weight is normally adjusted for are age of calf, age of dam, and hybrid vigor.
472	Calculations	* Beef Improvement Federation (BIF) guidelines and the AGA recommend taking weaning weights when a calf is between 160

		days to 250 days of age. Yearling weights should be taken between 320 days to 410 days of age.
473	Calculations	** Percent calf crop weaned per cow exposed = (Calves weaned/Number of cows exposed) x 100
474	Calculations	SPA stands for Standardized Performance Analysis. This NCBA sponsored program provides useful production and financial performance information for any size herd or production region.
475	Calculations	* When adjusting weaning weights (205-day weight) the following factors are used to make these adjustments: dam's age, age of calf and the sex of the calf.
476	Calculations	Cost of production is the sum (measured in dollars) of all purchased inputs and other expenses necessary to produce farm products. Cost of production statistics may be expressed as an average per animal, per acre, or per unit of production (bushel, pound
477	Carcass/Slaughter	USDA quality grades for young, "A" maturity beef are: Prime, Choice, Select and Standard.
478	Carcass/Slaughter	The beef carcass is divided into 8 wholesale cuts: chuck, rib, loin, round, flank, short plate, brisket, and shank.
479	Carcass/Slaughter	When evaluating cattle, external fat is referred to as fat cover, finish, or condition.
480	Carcass/Slaughter	There are 5 USDA Yield Grades (1,2,3,4,5).
481	Carcass/Slaughter	The USDA Yield Grade system provides an estimate of the cutability of a carcass.
482	Carcass/Slaughter	Cutability is the proportion of lean salable meat yielded by a carcass.
483	Carcass/Slaughter	A Yield Grade of 1 is the highest cutability as opposed to a Yield Grade of 5 that is the lowest.
484	Carcass/Slaughter	To ensure wholesomeness, inspection is mandatory by the federal government in all commercial slaughter plants.
485	Carcass/Slaughter	**The quality grade of a beef carcass is determined by the amount of marbling in the rib eye muscle and the physiological age of the carcass.
486	Carcass/Slaughter	*USDA feeder cattle yield grades are based upon frame size and muscling.
487	Carcass/Slaughter	The forequarter of a beef carcass is heavier than the hindquarter.
488	Carcass/Slaughter	Slaughter veal is not yield graded.
489	Carcass/Slaughter	Fat is necessary as an outside cover of a carcass to protect it during normal storage and handling.
490	Carcass/Slaughter	Heifers have the lowest lean to fat ratio.
491	Carcass/Slaughter	Cattle should be off feed at least 12 hours before slaughter.
492	Carcass/Slaughter	**When determining the maturity of the carcass, inspectors evaluate: shape and color of the ribs, the color of the lean in the

		longissimus muscle and the degree of ossification of the thoracic cartilage or buttons.
493	Carcass/Slaughter	Intramuscular fat is also known as marbling.
494	Carcass/Slaughter	Intermuscular fat is known as seam fat.
495	Carcass/Slaughter	Fat measurements are usually taken on cattle at the 12th rib; 3/4 distance of medial to lateral end of ribeye.
496	Carcass/Slaughter	Cattle that have been finished on a grass-rich diet prior to slaughter will have yellow colored fat. This is due to the high levels of beta-carotene found in grass which is stored in their fat after ingestion.
497	Carcass/Slaughter	Tenderness, juiciness, and flavor are three factors that influence the palatability of meat.
498	Carcass/Slaughter	Veal is the meat of calves butchered under 300 pounds.
499	Carcass/Slaughter	Meat is approximately 60 percent water.
500	Carcass/Slaughter	Fatness, muscling, and weight are the three main factors affecting yield grades.
501	Carcass/Slaughter	Age of the animal and days on feed are better indicators of overall palatability than marbling.
502	Carcass/Slaughter	Case-Ready beef is a term for beef cuts that arrive at the retail store ready to place in the meat display case. Walmart is the largest retailer utilizing case ready beef since it eliminates the need for a meat cutter at the retail level and that saves money.
503	Carcass/Slaughter	* Out cattle refer to cattle with too big or too small of carcasses, grading Standard or lower, dark cutters or Yield Grade 4s and 5s.
504	Carcass/Slaughter	* The top eight quality related problems noted by retailers, packers, consumers, and restaurant/foodservice operators are: 1) excess external fat; 2) injection-site blemishes; 3) size of individual cuts; 4) excessive seam fat; 5) inconsistency in the product; 6) low overall cutability; 7) bruise damage; 8) inadequate marbling.
505	Carcass/Slaughter	In 2024, U.S. meat companies produced an estimated 25.81 billion pounds of beef.
506	Carcass/Slaughter	KPH stands for Kidney, Pelvic, and Heart fat.
507	Carcass/Slaughter	Ribeye area is the only yield grade factor that assesses muscling.
508	Carcass/Slaughter	The normal range for dressing percent of Choice steers is 62-65%.
509	Carcass/Slaughter	* Boxed beef is a term used to describe beef marketed directly from the packing house to restaurants as individually wrapped, vacuum sealed, sub-primal or retail cuts.
510	Carcass/Slaughter	A non-ambulatory bovine animal is referred to as a downer. Current legislation prevents downer animals in the U.S. food system.
511	Carcass/Slaughter	Injection sites are a condition that puts an animal at risk for residue violation.
512	Carcass/Slaughter	The 9 primary cuts of beef are: round, sirloin, short loin, rib, chuck, flank, short plate, brisket, and fore shank.

513	Carcass/Slaughter	USDA “Standard” beef is the leanest grade of beef, as contains the least amount of marbling (the flecks of fat within the muscle). The second leanest grade is “Select”.
514	Ultrasound	The approximate correlation between ultrasound carcass data and actual carcass data is 70%.
515	Ultrasound	A certified ultrasound technician collects ultrasound data between 320-410 days of age. Ultrasound data is then used to predict Yield Grade, Ribeye Area, Fat Thickness and Marbling EPDs.
516	Ultrasound	The AGA only accepts ultrasound data from APTC-certified labs.
517	Ultrasound	Ultrasound measurements taken include ribeye area (REA), intramuscular fat percentage/marbling (IMF), rump fat, rib fat, and scan weight.
518	Feedlot	Steers and heifers ready to enter the feedlot for finishing are called feeders.
519	Feedlot	A feedlot consists of a group of pens where steers and heifers are finished for slaughter.
520	Feedlot	Feed efficiency is measured by the pounds of feed required to produce a pound of gain.
521	Feedlot	A realistic figure for a good average daily gain for cattle on feed or in a feedlot would be 3 to 4 pounds.
522	Feedlot	The conditioning process in the growing phase of cattle prior to finishing in the feedlot is called dry lot or backgrounding.
523	Feedlot	Three Gelbvieh traits desired by today's feedlot operations are growth, carcass leanness and feed efficiency.
524	EPDs	Total maternal (TM): An index that combines growth and milk information as a prediction of the weaning weight performance of calves from a sire's daughters. As an index, this value is not reported with an accompanying accuracy. A greater TM value means a mother that returns comparatively higher weaning weights on her calves. TM Index = MK EPD + ½ WW EPD.
525	EPDs	The American Gelbvieh Association's (AGA) EPDs are calculated in the multibreed genetic evaluation powered by BOLT single-step technology through IGS (International Genetic Solutions).
526	EPDs	A sire's EPD is a prediction of how his future progeny will perform on a comparative basis with other sires.
527	EPDs	*When an animal has a genomic test on file, that information is included with phenotypic information to generate genomically-enhanced EPDs for that animal. GE-EPDs are more accurate than EPDs that include only parental estimates.
528	EPDs	Most Gelbvieh and Balancer EPDs are now comparable with all breeds who participate in genetic evaluations through IGS (International Genetic Solutions). These breeds include Red Angus Association of American, American Simmental Association, the

		American Shorthorn Association, and the North American Limousin Foundation, just to name a few.
529	EPDs	The Gelbvieh bulls selected as trait leaders are those that ranked the highest in a specific trait.
530	EPDs	Cow Power is a program that is partially funded by the American Gelbvieh Foundation that was established to encourage AGA and AGJA members to collect more genomic tests on Gelbvieh and Balancer females.
531	EPDs	Milk EPD is a measure of the genetic ability of a sire's daughters to produce milk measured in pounds of progeny weaning weight.
532	EPDs	* A trait ratio of 112 means that the animal is 12% above the average in that trait.
533	EPDs	EPDs on non-parent animals are based on the individual's own record plus pedigree information.
534	EPDs	When evaluating sires to generate replacement heifers, a higher CED value will mean less calving difficulty in those daughters down the road.
535	EPDs	* The Stayability EPD predicts the probability that a cow or a sire's daughters will be retained in the herd past six years of age.
536	EPDs	For over 25 years, the AGA calving ease (CE) and calving ease daughter (CED) EPDs were reported in the form of a ratio. They are now reflected as percentages. Higher CE values equal more unassisted births from sires when mated to first-calf heifers. Higher CED EPDs indicate less calving difficulty from a sire's own first-calf heifers.
537	EPDs	The AGA's carcass related EPDs incorporate ultrasound data, as well as carcass data collected on a sire's progeny.
538	Bovine Anatomy	* The anatomical structure in cattle that is comparable to the human knee is the stifle.
539	Bovine Anatomy	* The cervix in the cow's reproductive tract creates the most difficulty for the artificial inseminator.
540	Bovine Anatomy	The vulva is the external opening of the vagina.
541	Bovine Anatomy	* The calf fetus develops within layers of membrane called the placenta through which it receives nourishment from the mother.
542	Bovine Anatomy	The stomach of a beef animal has 4 compartments: rumen, reticulum, omasum, and abomasum.
543	Bovine Anatomy	* The abomasum (true stomach) portion of a cow's stomach is most similar to the human stomach.
544	Bovine Anatomy	In a beef cow, the rumen compartment of the stomach has the greatest volume.
545	Bovine Anatomy	* Another name for the reticulum (one of the four stomachs of cattle) is honeycomb.
546	Bovine Anatomy	A cow has no upper incisors.

547	Bovine Anatomy	* The esophageal groove in calves allows milk to bypass the rumen and reticulum for digestion in the abomasum.
548	Bovine Anatomy	The cecum is in the first section of the large intestine.
549	Bovine Anatomy	In referring to cattle, the term "hooks" refers to hipbones.
550	Bovine Anatomy	The dewlap is the loose skin that hangs between the throat and brisket on cattle.
551	Bovine Anatomy	The poll is on top of the head.
552	Bovine Anatomy	The dewclaw is above the pastern on the back of the leg.
553	Bovine Anatomy	Femininity is the refined appearance of a female while masculinity is the rugged appearance of a male.
554	Bovine Anatomy	Both characteristics, femininity and masculinity are usually evaluated by observing the head, neck, and shoulder region.
555	Bovine Anatomy	The USDA uses dentition to determine an animal's age. Cattle over 30 months are evidenced by the eruption of at least one of the second set of permanent incisors.
556	Bovine Anatomy	"Post legged" refers to an animal with straight back legs.
557	Bovine Anatomy	"Parrot mouth" is a condition when the top jaw overlaps the lower jaw.
558	Bovine Anatomy	A scur refers to a rudimentary horn growth that may or may not become attached to the skull at maturity.
559	Bovine Anatomy	Conformation is the physical form of an animal; its shape and arrangement of parts.
560	Bovine Anatomy	Two of the best places on a calf that indicate natural muscling are the lower round and the forearm.
561	Bovine Anatomy	The amount of fat on a market animal is called finish.
562	Bovine Anatomy	Tripe is made from the rumen of a bovine.
563	Bovine Anatomy	* Peristalsis is the name for the rhythmic muscular contractions which occur in the rumen.