

Statement #	Category	Statement Text
1	People and Places	Lynn Valentine is the Gelbvieh Media Productions Coordinator and Gelbvieh World Graphic Design and Publication Coordinator.
2	People and Places	The current Multimedia Coordinator is Kelsi Christian
3	People and Places	Taylor Evans the current Member and Youth Programs Coordinator.
4	People and Places	The office of the AGA is located in Broomfield, Colorado
5	People and Places	The following is a list of the current AGA Board of Directors: Scott Starr, Walter Teeter, John Carrel, Klint Sickler, Dustin Aherin, Leland Clark, Dennis Gustin, Doug Hughes, Jeff Loveless, Derek Martin, Dan McCarty, Andrea Murray, Lowell Rogers, Randy Sienknecht and Jeff Swanson.
6	People and Places	The current AGA President is Scott Starr.
7	People and Places	Megan Slater is the current Director of Operations and Public Relations.
8	People and Places	The current members of the AGA Executive Committee are: Scott Starr, President; John Carrel, Vice President; Klint Sickler, Secretary, Walter Teeter, Treasurer.
9	People and Places	The current AGJA Board of Directors include: Callahan Grund, Kyle Vehige, Caitlyn Griffin, Jesse Henson, Grace Vehige, Aubree Beenken, Kallie Mattison, Anna Ring, Grady Hammer, and Wyatt Forbes.
10	People and Places	Callahan Grund is the current AGJA President.
11	People and Places	The ex-officio for the AGJA Board of Directors is Aubree Beenken.
12	People and Places	Tom Strahm is the current AGA Commercial Marketing Coordinator.
13	People and Places	The current Junior Gelbvieh Youth Ambassador is Braxton Murray and the current Intermediate Gelbvieh Youth Ambassador is Baxter Lowe.
14	People and Places	AGJA advisors are Mike & Toni Shrewsbury, Emily Griffiths and Andrea Murray
15	People and Places	Angela Vesco is the current Director of Breed Growth.
16	People and Places	Rebecca Mettler is the current Gelbvieh World Editor.
17	Trivia	Hamburger meat from a single steer will make about 720 quarter pound hamburger patties. That's enough for a family of 4 to enjoy hamburgers each day for nearly 6 months.
18	Trivia	*During grazing season, a calf deposits more than 531 pounds of manure. This amount includes over 21 million worm eggs.
19	Trivia	Christopher Columbus was a famous explorer who brought cattle from Spain to the West Indies on his second voyage to America.
20	Trivia	The AGA website address is www.gelbvieh.org
21	Trivia	Cattle can see colors.

22	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.
23	Trivia	A calf is approximately 70% water at birth.
24	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.
25	Trivia	Romans were the first known persons to brand cattle.
26	Trivia	Hamburger got its name from Hamburg, Germany and was brought to the U.S. by German immigrants in the 1800's.
27	Trivia	The average American eats 156 burgers each year.
28	Trivia	The biggest burger in the world weighed 6,040 pounds and was cooked in Montana.
29	Trivia	One gallon of milk weighs 8.6 pounds.
30	Trivia	On average, a dairy cow produces 90 glasses of milk daily, depending on genetics, feeding practices, and weather.
31	Trivia	Scientists in Japan have extracted gasoline from cattle manure. The process yields 0.042 ounces of gasoline from 100 grams or .05 ounces of manure.
32	Trivia	The average cow has more than 40,000 jaw movements per day.
33	Trivia	The U.S. nickname Uncle Sam is actually related to the beef industry. During the War of 1812, a meat packer from New York named Sam Wilson, supplied beef packed into barrels, to the United States Army stamped with "U.S.". Many people in the town of Troy, NY thought the letters U.S. stood for Uncle Sam, Sam Wilson's nickname, but what he intended it to stand for was the United States. Soldiers then began referring to the beef as "Uncle Sam's" and the two ideas merged. Uncle Sam became a symbol for the United States of America and this story was officially adopted by Congress in 1961.
34	Statistics	In 2017, the average age of a beef producer was 58.
35	Statistics	U.S. commercial slaughter total was 32.2 million head in 2017 (steers, heifer, cows and bulls)
36	Statistics	Cattle consume less than 2/10ths of 1% of all water used in the United States
37	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.
38	Statistics	There are 1.4 million jobs attributed to the beef industry.

39	Statistics	While the United States has less than 10 percent of the world's cattle inventory, it produces nearly 25 percent of the world's beef supply according to 2002 USDA data.
40	Statistics	Traditionally, the two largest dairy states are California and Wisconsin
41	Statistics	The beef industry is the single largest segment of American agriculture, which is our nation's largest industry.
42	Statistics	The two largest (based on circulation) beef magazines in the United States are: Beef and Drovers.
43	Statistics	The regions or states that have Gelbvieh associations as of 2018 are Colorado, Missouri, Iowa, Kansas, Kentucky, Mississippi, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Oregon/Washington, South Dakota, Tennessee, Utah/Idaho, and Virginia.
44	Statistics	26% of the earth's surface is used for livestock grazing.
45	Statistics	As of May 2017 the top ten states for AGA (adult) memberships were: Missouri, Kansas, Kentucky, Iowa, Tennessee, South Dakota, Nebraska, Colorado, Oklahoma, and North Carolina.
46	Statistics	As of May 2017, the top ten states for AGJA memberships were: Missouri, Kansas, Kentucky, Nebraska, Iowa, South Dakota, Minnesota, Illinois, Mississippi, and Colorado.
47	Statistics	As of May 2017, the top five states of AGA active cows are: Kansas, Missouri, Nebraska, South Dakota, North Dakota.
48	Statistics	The top five states for total registrations for the 2014-2015 fiscal year are: Kansas, Nebraska, South Dakota, Missouri, North Dakota
49	Statistics	As of May 2017, the total active animals represented in the annual herd assessment was 39,886
50	Statistics	The average herd size for AGA members is 39.6 cows.
51	Statistics	In 2017, more than 50% of the total value of U.S. sales of cattle and calves comes from the top 5 states: Texas, Nebraska, Kansas, California, and Oklahoma.
52	Statistics	Barely 3% of the U.S. population is counted as farmers and ranchers, however, total jobs related to food production account for 17.4% of workers and 16.3% of our gross domestic product.
53	Statistics	Cattle numbers in the U.S. peaked in 1975 at 132 million head.
54	Statistics	The Holstein breed has the largest number of registered cattle in the United States.

55	Statistics	Agriculture and related industries are the largest private employer in the U.S. and cattle production in the largest segment of agriculture. Cattle production involves about 1.1 million family farms and ranches.
56	AGA Policy	Genetic defects can be classified as monitor, warning, or watch status by the AGA.
57	AGA Policy	** All AI sires and Donor Dam must be tested for the following genetic conditions: Arthrogryposis Multiplex (AM), Nueropathic Hydrocephalus (NH) and Osteopetrosis (OS), Developmental Duplication (DD) and Contractural Arachnodactyly (CA).
58	AGA Policy	* The AGA Board of Directors policy defines an ACTUAL genotype for each defect with the abbreviation for the defect (AM, NH, OS, DD or CA) followed by the status. For Example : AM-Free = a suspect animal that is free or clean of the gene by DNA testing.
59	AGA Policy	Any abnormalities in Gelbvieh cattle should be reported to the AGA using an Abnormal Calf Report.
60	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.
61	AGA Policy	When submitting calving information to the AGA, 3 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.
62	AGA Policy	Information like birth weight, weaning weight, yearling weight and other information on cattle is submitted to the AGA to be processed.
63	AGA Policy	The American Gelbvieh Association allows only replication cell-cloned animals to be eligible for registration.
64	AGA Policy	The cell-donor animal must have a DNA parentage markers on record with the official DNA testing lab of the AGA prior to harvest of genetic material.
65	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.
66	AGA Policy	The International Year Codes for this year and the next three years are as follows: 2017--E, 2018--F, 2019--G, 2020--H
67	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.
68	AGA Policy	The AGA considers females with at least 81.6% Gelbvieh blood to be purebred.

69	AGA Policy	The AGA considers bulls with at least 81.6% Gelbvieh blood to be purebred.
70	AGA Policy	As a part of the AGA's total herd reporting system it is important that members report every calf, even if it didn't survive, so the dam's Lifetime Cow Summary will be complete and give the true picture of the dam's reproductive history. The calf's sex and birth date must be recorded.
71	AGA Policy	* AGA will allow computation of calves out of registered Gelbvieh or Balancer bulls and non-Gelbvieh or non-registered Gelbvieh dams.
72	AGA Policy	A.I. sires must be DNA typed (GGP-HD), parent verified, tested 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.
73	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.
74	AGA Policy	* The AGA adopted a mandatory Total Herd Reporting system in 2000. This system requires that all cows either record a calf or report a reproductive status code to the AGA each year. This applies to all AGA & AGJA members.
75	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.
76	AGA Fees	To register cattle with the AGA, individuals must have an active membership AND have paid annual Herd Assessment dues.
77	AGA Fees	AGA members receive a free subscription to Gelbvieh World magazine, and have access to more than 40 AGA programs and services.
78	AGA Fees	The Herd Assessment rate is \$25.00, yearly, for females over 13 months of age, as of January 1 of each year.
79	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.
80	AGA Fees	A one-year subscription for Gelbvieh World is \$35.00.
81	AGA Fees	The AGA is on a cash basis, therefore you must send money in with work to be processed and mailed out. The other option is to provide a credit card number with your work sent to the AGA office.

82	AGA Fees	Dams that are not registered with the American Gelbvieh Association (Angus, Red Angus, Simmental, etc.) will be charged a \$25 herd assessment fee if a breeder would like to register the calves with the AGA. The calves must be sired by a registered Gelbvieh or Balancer bull.
83	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.
84	AGA Registration	The AGA defines a breeder as the owner of the dam, at the time of conception, of the animal being registered.
85	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.
86	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.
87	AGA Registration	* A Balancer is a registered animal with two registered parents and has 25-75 percent Gelbvieh and 25-75 percent Angus or Red Angus with only 1/8 of a Balancer's breed makeup being another breed or unknown.
88	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.
89	AGA Registration	DigitalBeef is the computer software program available to Gelbvieh breeders to keep track of animal records and exchange data electronically with the AGA.
90	AGA Registration	In order to change the name of an animal you have purchased you will need to get the permission of the person who registered it.
91	AGA Registration	Calf registration can be submitted to the AGA via traditional paper forms and AGA's Online Registry System
92	AGA Registration	*On the back of Registration Certificates is a transfer form that can be used as an affidavit to transfer ownership. Ownership can be transferred at anytime.
93	AGA Membership	A herd prefix is a breeder's choice of 3 or 4 letters used to tattoo animals produced in his operation.
94	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.
95	AGA Membership	*The cost to reactivate a female taken off of the Herd Assessment Inventory is \$25.00 for each year the cow has been off of the inventory. For example, if a cow was left off of the inventory for one year, the cost is \$25 to reactive her.

96	AGA Membership	The age requirement for membership in the AGJA is birth through 21, as of January 1, of the current year.
97	AGA Membership	In order to show cattle at an AGJA-sponsored regional or national show, a member must be 8 years old by January 1 of that year.
98	AGA Membership	An AGA membership fee is \$120 for the first year, and \$120 annually. This fee includes a subscription to the Gelbvieh World.
99	Organizations	MARC stands for Meat Animal Research Center.
100	Organizations	USDA refers to the United States Department of Agriculture.
101	Organizations	NCBA stands for National Cattlemen’s Beef Association and it is a member organization representing U.S. beef producers.
102	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.
103	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.
104	Organizations	National Cattlemen's Beef Association is commonly referred to as NCBA
105	Organizations	R-CALF stands for the Ranchers and Cattlemen’s Action Legal Fund. The national R-CALF headquarters is in Billings, Montana.
106	Organizations	YBIC stands for the Youth Beef Industry Congress.
107	Organizations	BIF stands for Beef Improvement Federation and was chartered in 1968.
108	Organizations	The primary purpose of the BIF is to develop procedures for evaluating breeding value of beef animals.
109	Organizations	Cattle-Fax, located in Centennial, Colorado, is a market reporting organization that supplies information on market outlook and market inventory.
110	Organizations	The Federal Meat Grading Service was established in 1925.
111	Organizations	APHIS is the Animal and Plant Health Inspection Service.
112	Organizations	The headquarters for the National Cattleman's Beef Association (NCBA) is in Centennial, Colorado.
113	Organizations	The National Beef Cook-off is sponsored by the American National CattleWomen’s Association.
114	Organizations	NCBA-PAC is the abbreviation for National Cattlemen's Beef Association - Political Action Committee and is the cattlemen's voice in Washington, D.C.

115	Organizations	CDC (Centers for Disease Control and Prevention), a federal agency headquartered in Atlanta, Georgia, plays a critical role in investigating and controlling disease outbreaks at home and abroad.
116	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.
117	Organizations	The World Health Organization (WHO), the United Nations specialized agency for health, was established in 1948 to promote the highest possible level of health (physical, mental, and social well-being) to all people. WHO is governed by 192 Member States.
118	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.
119	Organizations	The Gelbvieh World magazine is a member of LPC, Livestock Publications Council.
120	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.
121	Food Safety	*The seven principles of the Hazardous Analysis Critical Control Points (HACCP) are: to conduct a hazard analysis, identify critical control points, establish critical limits, monitor the critical control points, determine appropriate corrective actions, record keeping, and verification procedures.
122	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.
123	Food Safety	The “Fight Bac!” campaign has four simple steps to food safety. 1. Wash hand and surfaces often. 2. Don’t cross contaminate 3. Cook to proper temperatures. 4. Refrigerate promptly.
124	Food Safety	* Irradiation was approved for use on beef products in 1997. Irradiation has proven effective in killing e-coli bacteria and other harmful pathogens in ground beef.
125	Food Safety	The three keys to eliminating the majority of food borne illnesses are: proper handling, storage and preparation.
126	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).
127	Food Safety	According to the Centers for Disease Control and Prevention (CDC) the incidence of bacteria on meatproducts decreased significantly. The incidence of E. coli O157:H7 in ground beef samples tested by USDA declined 80% since 1999.

128	Animal Health	According to the Centers for Disease Control, Swine influenza viruses are not spread by food. You cannot get swine influenza from eating pork or pork products. Eating properly handled and cooked pork products is safe.
129	Animal Health	The term "scour" means persistent diarrhea.
130	Animal Health	The disorder characterized by gas distention of the rumen as seen on an animal's left side is bloat.
131	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.
132	Animal Health	* Bangs is the term cattlemen use for the disease Brucella abortus or brucellosis.
133	Animal Health	Both bulls and heifers need to be vaccinated for blackleg.
134	Animal Health	Diarrhea, or scours, is often caused by E coli bacteria.
135	Animal Health	Bovine Viral Diarrhea is abbreviated BVD.
136	Animal Health	*Persistently Infected (PI-BVD) cases can be identified through a diagnostic procedure that came online in 1999 after University of Nebraska pathologists discovered that PI animals could be detected via a skin sample taken from a calf's ear soon after birth.
137	Animal Health	** The bacteria, clostridium chauvei, causes blackleg.
138	Animal Health	* Overeating disease is more properly known as Enterotoxemia.
139	Animal Health	* Infectious Bovine Rhinotracheitis is abbreviated IBR.
140	Animal Health	The mineral most often linked to grass tetany is Magnesium.
141	Animal Health	* Brucellosis, anaplasmosis, leptospirosis, BVD, IBR, and vibriosis can cause abortion in cattle.
142	Animal Health	The common name for IBR is red nose.
143	Animal Health	Ringworm is caused by a fungus and is transmittable from cattle to humans.
144	Animal Health	Lockjaw is the common name for tetanus.
145	Animal Health	Cattle Grubs are larvae of the Heel Fly.
146	Animal Health	The average rectal temperature of beef cattle is 101.0-101.8 degrees F.
147	Animal Health	* "White Muscle Disease" is caused by a deficiency of vitamin E, selenium, or both.
148	Animal Health	* As a rule, cows that have retained placentas at calving also have more breeding problems.
149	Animal Health	** Pinkeye is the common name for the disease "infectious bovine keratoconjunctivitis".
150	Animal Health	Warts are contagious to other calves.

151	Animal Health	* Most pieces of hardware ingested by cattle settle in the reticulum or second stomach.
152	Animal Health	Overeating, drinking too much milk, bacterial infection or viral infection are reasons for scours in calves.
153	Animal Health	Mastitis is the broad name used to describe udder infections or disease.
154	Animal Health	Within the first 30-60 minutes after calves are born they should receive colostrum.
155	Animal Health	Scours and respiratory pneumonia are the two diseases that cause the greatest loss in young calves.
156	Animal Health	After the first 12 hours of life, a calf cannot absorb sufficient antibodies due to rapid changes in the digestive system.
157	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.
158	Animal Health	White blood cells help protect the body from disease and infection.
159	Animal Health	* Cows and heifers should be vaccinated for BVD at least 30-60 days before breeding.
160	Animal Health	* Scours in calves causes rapid dehydration, loss of essential body chemicals and the build-up of acid.
161	Animal Health	* Blue tongue is the 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 the a Midge, which is similar to a Sand Fly.
162	Animal Health	The best age to dehorn a calf is from one day to 3 months.
163	Animal Health	* The three ways to diminish tissue blemishes resulting from intramuscular (IM) injections, especially clostridial 7-way vaccine are: 1) administer all clostridial bacterins subcutaneously in the neck region, 2) avoid repeat injections of clostridial bacterins, especially late in the feeding period, 3) avoid intramuscular injections of all injectable products whenever other "labeled" routes of administration are available.
164	Animal Health	Heifers should be vaccinated for Brucellosis between 4-10 months of age and are given permanent identification with a official Brucellosis eartag and ear tattoo.
165	Animal Health	A producer can improve injection-site quality by administering products in the neck or shoulder region, avoiding IM injections whenever other labeled routes are available. Products approved for subcutaneous injections should be administered using the ten

166	Animal Health	Minimum biosecurity measures include having visitors' 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 a
167	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.
168	Animal Health	*Chronic Wasting Disease (CWD) is a brain disorder that kills deer and elk. CWD is one of several types of Transmissible Spongiform Encephalopathies (TSE). These slow-acting degenerative diseases attack the central nervous system, causing brain damage a
169	Animal Health	*West Nile Virus is spread by the bite of an infected mosquito. The virus affects the central nervous system and swelling of brain tissue. The virus can result in severe or fatal illness. West Nile has been shown to infect horses, cats, bats, chipmunks
170	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 t
171	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
172	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
173	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.
174	Reproduction	A cow is "bulling" when she tries to ride other cows or stands while cows try to ride her.
175	Reproduction	Estrus or heat is the period in which a female will partake in mating.
176	Reproduction	Another term for estrus is "heat".
177	Reproduction	A cow in continuous heat due to cystic ovaries or other defects caused by hormonal imbalance is referred to as a "buller".

178	Reproduction	Estrous synchronization is the use of hormones to cause a group of cows to come into heat or estrus at the same time.
179	Reproduction	Synthetic prostaglandin (lutalyse) products can be used for heat synchronization or inducing abortion in beef cattle if they are pregnant.
180	Reproduction	Estrous synchronization with prostaglandin works only in cycling cows.
181	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.
182	Reproduction	A donor cow provides the embryo for embryo transfers. Donors are typically flushed on Day 7 of a pregnancy.
183	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.
184	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.
185	Reproduction	Liquid Nitrogen is used in semen tanks to keep the semen frozen.
186	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 in order to maintain the proper storage climate for the semen.
187	Reproduction	*University of Arizona – Tucson has developed a test to identify higher fertility bulls. This test identifies a unique protein marker in bovine semen called Fertility Associated Antigen (FAA).
188	Reproduction	Most Gelbvieh heifers are ready to breed between the ages of 12-14 months.
189	Reproduction	A barren cow is a sterile female.
190	Reproduction	An open cow should come into heat every 18-21 days.
191	Reproduction	The time span that a cow will accept a bull's services is approximately 6-14 hours.
192	Reproduction	When a breeder says a cow is "heavy" he means she is in the last trimester of her pregnancy.
193	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.

194	Reproduction	A mature bull can safely breed 25-35 cows. A yearling bull should be limited to 15-25 cows.
195	Reproduction	Cryptorchid refers to male cattle with one or both testicles undescended.
196	Reproduction	When a vet says a cow is "safe-in-calf" it means she is pregnant.
197	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.
198	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.
199	Reproduction	The sire determines the sex of the calf.
200	Reproduction	Chromosomes are present in the nucleus of each body cell and carry the hereditary material called genes.
201	Reproduction	All inherited characteristics are contained in the fertilized egg (embryo).
202	Reproduction	Relaxin is the hormone that acts to widen the birth canal before parturition.
203	Reproduction	** Fimbria (infundibulum) is the thin membranous structure at the end of the oviduct, which partially covers the ovary.
204	Reproduction	A follicle is a structure on the ovary that is the source of the egg at ovulation.
205	Reproduction	The major function of the scrotum of a bull is to regulate temperature of the gonads or testicles.
206	Reproduction	First calf heifers generally have more difficulty calving than mature cows.
207	Reproduction	Testosterone is the hormone responsible for male behavior and sex drive.
208	Reproduction	Gomer is the term used for a bull that is used to detect heat but is incapable of settling cows.
209	Reproduction	Pelvic size and size of calf are primary factors that affect how easily a female calves.
210	Reproduction	Underfeeding heifers during their first year of life will delay their first breeding.
211	Reproduction	* Selecting bulls with high calving ease & low birth weight EPDs for use as sires can reduce calving difficulty in heifers.
212	Reproduction	* About 12 hours after the end of standing heat ovulation occurs.
213	Reproduction	* Fertilization usually occurs in the oviduct of the cow's reproductive tract.
214	Reproduction	Parturition is the process of giving birth.

215	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.
216	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.
217	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.
218	Animal Science	*Recently in 2009, in a project that took over six years, involving more than 300 scientists from 25 countries, an annotated sequence of the cattle genome was developed for the first time.
219	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 ge
220	Animal Science	*Syndactyly (Mule Foot) is a genetic defect that results in the toes of hoof being fused together. Can range from one hoof to all four hooves affected.
221	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.
222	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.
223	Animal Science	* Cortisone, a drug used to relieve pain in humans, is made from the gallbladder of a cow.
224	Animal Science	* Growth hormone is technically called somatotrophin.
225	Animal Science	* Growth hormone is secreted from the anterior pituitary gland.
226	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.
227	Animal Science	Genetics is the name for the study of the laws of inheritance.

228	Animal Science	Heritability is defined as the portion of the phenotypic differences that is 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.
229	Animal Science	Heritability is the portion of the phenotypic differences between animals that is due to heredity.
230	Animal Science	Cattle cells contain 30 chromosome pairs.
231	Animal Science	Birth weights in cattle are moderately to highly heritable.
232	Animal Science	An animal is said to be heterozygous for a trait if it carries one dominant and one recessive gene for that trait.
233	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
234	Animal Science	*In January 2005, MMI Genomics launched a DNA test for determining homozygous polled. The test is called Tru-Polled and requires a blot of blood from the animal's ear for analysis. The test has a 95% accuracy.
235	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.
236	Animal Science	* BSE stands for bovine spongiform encephalopathy. Its more common name is Mad Cow Disease. BSE dramatically affected the beef industries in Europe, Japan, Canada, and the United States in recent years.
237	Animal Science	Genotype is the genetic make-up of an animal.
238	Animal Science	Phenotype is the physical appearance of an animal due to genetic and environmental influences.
239	Animal Science	Double muscle is the common name for genetic muscular hypertrophy in beef cattle.
240	Animal Science	Stomach or intestinal worms can be controlled by medicating an animal's feed.
241	Animal Science	Sanitation is the best prevention for flies.
242	Animal Science	Grubs are small legless insects that begin as eggs on a calf's leg, move through his body and out his back.
243	Animal Science	Lice and flies are the most common external parasites in cattle.
244	Animal Science	Late winter or early spring is the best time for lice control.
245	Animal Science	The face fly causes economic losses by transmitting pinkeye.
246	Animal Science	The immature or larval stage of a fly is a maggot.
247	Animal Science	Horn flies affect beef cattle by sucking their blood.

248	Animal Science	Face flies and horn flies develop as maggots in freshly deposited cattle manure.
249	Animal Science	Lice can cause anemia in cattle by sucking blood out of the animal.
250	Animal Science	Warts are caused by a virus.
251	Animal Science	The hormone oxytocin primarily causes milk let down.
252	Animal Science	* Pheromones are any chemical communication between individuals.
253	Animal Science	When a cow is frightened the hormone Epinephrine (adrenaline) is likely to be secreted.
254	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.
255	Animal Science	Leptin is a protein produced by fat tissue that research links to an animals 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.
256	DNA Testing	DNA fingerprinting 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.
257	DNA Testing	*Calpain is a naturally occurring enzyme that contributes a role in beef tenderness by weakening muscle fibers postmortem (after death).
258	DNA Testing	*Calpastatin blocks calpain and the role it plays in postmortem tenderization.
259	DNA Testing	Current DNA tenderness tests, check for the presence of calpastatin and calpain.
260	DNA Testing	Geneseek DNA is the primary genomic testing lab for the AGA.
261	DNA Testing	**SNP is a single nucleotide polymorphism. A SNP acts as a pointer for the presence of a gene.
262	Nutrition	Examples of protein feeds are soybean meal, alfalfa meal, cottonseed, and alfalfa hay.
263	Nutrition	Amino Acids are the building blocks of protein.
264	Nutrition	Roughage refers to a bulky feed that is low in energy and high in fiber such as hay.
265	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.
266	Nutrition	Young cattle use most of their feed for growth and maintenance.
267	Nutrition	Mature livestock use most of their feed for maintenance and reproduction, rather than growing.
268	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.

269	Nutrition	In general, you should start feeding a steer for show at 6-8 months of age.
270	Nutrition	Progesterone, estrogen, vitamin D, and aldosterone are all hormones synthesized from cholesterol.
271	Nutrition	Net energy is defined as the energy remaining after the deduction of digestive losses, gas losses, urinary losses and the work of digestion.
272	Nutrition	Vitamin A is required for the functioning of the eye in the dark.
273	Nutrition	A vitamin D deficiency in calves results in rickets.
274	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.
275	Nutrition	** A cattle liver functions chiefly as an aid to the alimentary canal in nutrient digestion.
276	Nutrition	The primary digestive activity that occurs in a cow's rumen is feedstuff fermentation.
277	Nutrition	Phosphorus has been called the "master mineral" because it is involved in practically all of the metabolic processes of the body.
278	Nutrition	Rennin is the enzyme in a calf's stomach that causes milk to form a curd.
279	Nutrition	* Surplus Vitamin A is stored in the liver for up to 90 days.
280	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, antibodies.
281	Nutrition	Lactose is the chemical name for milk sugar.
282	Nutrition	Maintenance, growth, lactation and reproduction are the four main divisions that feed usage can be categorized into.
283	Nutrition	Vitamin A is the most important vitamin for a breeding beef animal.
284	Nutrition	Salt and minerals are normally fed free choice to beef cows on pasture.
285	Nutrition	Energy, protein, vitamins, minerals and water are the 5 primary nutrients.
286	Nutrition	Bacteria and other microbes of the rumen enable cattle to digest cellulose.
287	Nutrition	Overfeeding corn to cattle not used to a concentrate feed can cause founder or acidosis.
288	Nutrition	Drought is likely to increase nitrate, a toxic factor, in corn silage.
289	Nutrition	Calcium is most likely to be deficient with cattle maintained on a high concentrate diet.
290	Nutrition	High concentrate feeding is associated with liver abscesses.
291	Nutrition	Growth-promoting implants affect feed efficiency.

292	Nutrition	*Protein in feed not digested by microbes of the rumen passes to the lower gut for digestion as bypass protein.
293	Nutrition	Distiller's grains; Brewer's grains; corn gluten meal and dehydrated alfalfa are high in by-pass protein.
294	Nutrition	Nutrient requirements for the pregnant beef cow are highest during the last third of pregnancy.
295	Nutrition	It is important to change a cow's feed slowly to give rumen bacteria time to adapt to a new diet.
296	Nutrition	Salt is iodized to supply iodine, which helps control goiter, a condition of the thyroid.
297	Nutrition	TDN stands for: total digestible nutrients.
298	Nutrition	Calcium and phosphorus are minerals essential for proper bone development.
299	Nutrition	In drought stunted corn, the largest amounts of nitrate will be found in the stalks.
300	Nutrition	Feed is digested in the rumen by bacteria and protozoa.
301	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.
302	Nutrition	Cows will eat less on a hot summer day.
303	Nutrition	Rumination is regurgitation and chewing of the cud.
304	Nutrition	Molasses is a good source of energy, which is used in many feeds.
305	Nutrition	NPN stands for non-protein nitrogen. Urea is a form of non-protein nitrogen.
306	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.
307	Nutrition	A feedstuff that has high fiber content would most usually be classified as roughage.
308	Nutrition	Lice and worms will cause cattle to be slow gainers.
309	Nutrition	Of the classes of nutrients (vitamins, minerals, proteins, carbohydrates, water, and fats) water is the most economical in almost all cases.
310	Nutrition	Iron, copper, phosphorus, calcium, and magnesium are examples of minerals.
311	Nutrition	White muscle disease is caused by a deficiency of either Vitamin E and/or Selenium.
312	Nutrition	* The total amount of water used in on-farm production of grain-fed beef averages 200 gallons per pound of carcass beef.
313	Nutrition	Mature cattle consume 8-15 gallons of water per day.
314	Nutrition	Feedgrains are grains that are not suitable for human consumption, but when fed to animals resulting in highly nutritious nutrients for humans.

315	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.
316	Nutrition	ZIP is an acronym often used to communicate beef's nutritional value with zinc, iron and protein.
317	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.
318	Gelbvieh History & Development	Artificial insemination was the technology used to introduce Gelbvieh genetics to the United States.
319	Gelbvieh History & Development	Gelbvieh cattle were first imported into the United States in 1972.
320	Gelbvieh History & Development	Leness Hall of Carnation Genetics, Washington was the person responsible for first importing Gelbvieh semen to the United States.
321	Gelbvieh History & Development	In Germany, Gelbvieh are also called German Yellow.
322	Gelbvieh History & Development	The bull stud that brought the first Gelbvieh semen to the United States was Carnation Farms Breeding Service (Carnation Genetics).
323	Gelbvieh History & Development	Gelbvieh semen was introduced into the United States in 1971.
324	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.
325	Gelbvieh History & Development	Gelbvieh cattle originated in the Bavarian area of Germany.
326	Gelbvieh History & Development	Gelbvieh cattle were performance tested in Germany for over 110 years.
327	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.
328	Gelbvieh History & Development	There are fullblood, purebred, percentage, hybrid, red, black and polled markets for Gelbvieh and Balancer bulls and females.
329	Gelbvieh History & Development	The initials AGA stand for American Gelbvieh Association.
330	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.

331	Gelbvieh History & Development	The official publication for the AGA is Gelbvieh World.
332	Gelbvieh History & Development	The first issue of Gelbvieh World was published in July/August of 1986
333	Gelbvieh History & Development	The Gelbray breed was developed by crossing Gelbvieh and Brahman.
334	Gelbvieh History & Development	Homer & Dotti Knost, Clinton, Louisiana developed the Gelbray breed.
335	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.
336	Gelbvieh History & Development	Many Gelbvieh fullbloods are horned, with some instances of the polled trait.
337	Gelbvieh History & Development	In 1982, John Green, Franklinton, Louisiana was the first to produce a Gelbvieh calf that survived the detailed frozen embryo process.
338	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.
339	Gelbvieh History & Development	The first AGA president was Gallagher Rule, who also helped start the American Gelbvieh Association.
340	Gelbvieh History & Development	Founding memberships for AGA were \$500.00.
341	Gelbvieh History & Development	Ken Thorstenson was the 2018 Hall of Fame Inductee.
342	Gelbvieh History & Development	The annual herd summary program was instituted in 1985 to let members report the animals no longer producing in their herds.
343	Gelbvieh History & Development	Two services offered to the membership as a result of the Herd Summary are a Lifetime Cow Summary on every cow and a registration application pre-printed with registered cow information.
344	Gelbvieh History & Development	On their herd assessments members are charged \$25.00 per head for females over 13 months of age. This includes one calf registration and one transfer that is tied to the specific cow the assessment was paid for.
345	Gelbvieh History & Development	The Lifetime Cow Summary reports a cow's progeny performance.

346	Gelbvieh History & Development	The Gelbvieh Sire Summary is divided into two sections: Progeny Tested and Genetic Indicator sires.
347	Gelbvieh History & Development	The 5 organizers of AGA were Gallagher Rule, Merle Buss, Mitch Dobson, Edd Pritchett and Fred Twietmeyer.
348	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 - Sillwater, Oklahoma, 2017 - Lincoln, Nebraska, 2018 - Waterloo, Iowa.
349	Gelbvieh History & Development	* Past Presidents of AGA are: Gallagher Rule, Don Maskill, Charles Cooper, Johnny Green, Rod MacLennan, Charles Clark, Dotti Knost, Jerry Mettler, Earl Buss, Ed Kalianoff, Jim Beastrom, Alan Albers, C.K. Allen, Tom Cone, Larry Martin, Rick Soelzer, John Burbank, Al Knapp, Mark Goes, John Barte, Wayne Roitsch, Bill Wilkinson, Steve Munger, John Carrel, Jay Johnson, Stuart Jarvis, Vaughn Thorstenson, Rob Arnold, and Neal Pearson.
350	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, and Ken Thoerstenson.
351	Gelbvieh Traits	Problems with pink eye are limited in Gelbvieh cattle due to good pigmentation, which is one of the Gelbvieh traits.

352	Gelbvieh Traits	The Gelbvieh disposition is best described by the term "docile".
353	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.
354	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.
355	Gelbvieh Traits	* According to a 2003 AGA 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.
356	Gelbvieh Traits	* According to a 2003 AGA survey of Commercial cattle producers the four primary advantages of Gelbvieh cross feeder calves are growth, muscle, leanness and temperament.
357	General Cattle Knowledge	In any species of animal, the dam of an offspring is the female parent.
358	General Cattle Knowledge	In any species of animal, the sire of an offspring is the male parent.
359	General Cattle Knowledge	Cows are female cattle that have produced at least one calf.
360	General Cattle Knowledge	Cattle of either sex, under one year of age, are called calves.
361	General Cattle Knowledge	WDA is the abbreviation for Weight per Day of Age.
362	General Cattle Knowledge	When a cattleman says that a cow has "dropped", he means she has calved.
363	General Cattle Knowledge	A herd sire is a principal breeding bull in the herd.
364	General Cattle Knowledge	When a breeder describes a cow as being "broody" he means that she gives the appearance of being a good mother.
365	General Cattle Knowledge	The paper that lists the sire and dam of a registered animal is the registration certificate.
366	General Cattle Knowledge	Cattle that are genetically hornless are said to be polled.
367	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.
368	General Cattle Knowledge	In a pedigree, the letters E.T. stand for embryo transfer.
369	General Cattle Knowledge	The most commonly used by-product of beef animals is leather.
370	General Cattle Knowledge	A herd bull battery consists of bulls in service in a herd.
371	General Cattle Knowledge	* *A contemporary group can be defined as a group of animals of a similar age, same sex, and similar management.
372	General Cattle Knowledge	Castration refers to the process of removing the testicles.

373	General Cattle Knowledge	Cattle futures markets are used to manage price risk in the cattle business.
374	General Cattle Knowledge	In any species of animal, the word "progeny" means offspring.
375	General Cattle Knowledge	When a breeder says a cow is "open", he means she is not pregnant.
376	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.
377	General Cattle Knowledge	Heifers are female cattle that have not born offspring.
378	General Cattle Knowledge	Dystocia is another term for difficult calving.
379	General Cattle Knowledge	A male bovine animal that has been castrated before sexual maturity is a steer.
380	General Cattle Knowledge	A frame six yearling bull has a 51-inch hip height.
381	General Cattle Knowledge	Ideally a cow should have a calf each year beginning at two years of age.
382	General Cattle Knowledge	Steers and heifers that have been finished for slaughter are referred to as feeder cattle.
383	General Cattle Knowledge	A "freemartin" is a sterile heifer born twin to a bull.
384	General Cattle Knowledge	Bull calves, in general, are expected to weigh more at weaning than heifers.
385	General Cattle Knowledge	* The average generation interval in cattle is 4.5 to 6 years.
386	General Cattle Knowledge	* Selection differential is the superiority of parent stock compared to the average of the herd from which they were selected.
387	General Cattle Knowledge	Cattle, sheep and goats all belong to the same scientific family grouping in classification.
388	General Cattle Knowledge	* Bovidae, meaning hollow horned, is the cattle family classification.
389	General Cattle Knowledge	Cattle were first domesticated in the year 7,000 BC
390	General Cattle Knowledge	The world's leading country in cattle numbers is India.
391	General Cattle Knowledge	Shade and/or cool water are essential for calves in hot weather.
392	General Cattle Knowledge	Loss of weight during shipping is called shrink.
393	General Cattle Knowledge	A normal amount of shrink to expect is 3-6 percent.
394	General Cattle Knowledge	Lactation is the period of time that a cow is milking.
395	General Cattle Knowledge	Hip height, age and sex are the 3 pieces of data necessary to calculate frame score.
396	General Cattle Knowledge	Bulls used for breeding purposes should not be implanted with a growth stimulant because it severely retards testicle development.
397	General Cattle Knowledge	The preferred width of handling chutes is 22 to 28 inches.
398	General Cattle Knowledge	Most livestock futures are traded at the Chicago Mercantile Exchange.

399	General Cattle Knowledge	Udder and teat soundness are a concern for a number of 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 new born calves, and herit
400	General Cattle Knowledge	Cattle improve grass growth by aerating the soil with their hooves, allowing oxygen to enter the soil.
401	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 similar to humans.
402	General Cattle Knowledge	Animal welfare is based 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.
403	General Cattle Knowledge	The majority of 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).
404	General Cattle Knowledge	Public land is land owned by the local, state, or federal government.
405	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.
406	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.
407	Breeds	A breed is described, as a group of animals having a common origin and as a result of breeding and selection, possess common characteristics such as color, ears, horns, etc.
408	Breeds	Examples of Continental European breeds are: Gelbvieh, Maine Anjou, Blonde d'Aquitane, Charolais, Salers, Simmental, Chianina, Limousin or Braunvieh.
409	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.
410	Breeds	Examples of British (English) breeds are: Angus, Hereford, Galloway, Shorthorn, Red Angus, Polled Hereford, South Devon
411	Breeds	Any combination of two or more breeds is a crossbred animal.

412	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.
413	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, and Nelore.
414	Breeds	* If a fullblood Gelbvieh bull is mated to a cow that is 1/2 Hereford & 1/2 Angus, the fractions of each breed the calf would be are 1/2 Gelbvieh, 1/4 Angus, 1/4 Hereford.
415	Breeds	An animal that has some Brahman blood is referred to as being "eared".
416	Breeding Systems	Robert Bakewell was a famous man from Great Britain that first practiced line breeding to produce animals of a fixed type.
417	Breeding Systems	The term F1 refers to the first cross of two unrelated pure breeds.
418	Breeding Systems	Another term for hybrid vigor is heterosis.
419	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.
420	Breeding Systems	In a breeding herd, sires are usually selected on the basis of a combination of things, namely: pedigree, conformation, performance, fertility, eye appeal, progeny, and EPDs.
421	Breeding Systems	Get-of-Sire means calves sired by the same bull.
422	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.
423	Breeding Systems	Culling is a process of eliminating low quality animals from a herd.
424	Breeding Systems	Line breeding is a mating system, which concentrates the inheritance of one or more ancestors in the pedigree.
425	Breeding Systems	Inbreeding is mating of closely related animals.
426	Breeding Systems	Crossbreeding is mating of animals from different breeds.
427	Breeding Systems	An animal whose parents are both of the same breed is considered a "straight-bred."
428	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.
429	Identification	The permanent identification number in an animal's ear is a tattoo.
430	Identification	A tattoo can reflect several different things, such as the year the calf was born, the off spring's parents, or the sequence as to when a calf was born.
431	Identification	Three types of animal identification include ear tag, number brand, and tattoo.

432	Identification	Electronic identification by using bar code or radio frequency transmission is known as eID.
433	Identification	An animal identification device that contains an electronic chip is know as an eTag.
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	RFID stands for radio frequency identification. RFID is any electronic identification system comprised of a reader/scanner/interrogator and a transponder that can read or write data content using a specified radio frequency.
437	Identification	NAIS is an acronym for National Animal Identification System. The NAIS is a national program intended to identify all agricultural animals and track them as they come into contact with, or are inter-mixed with, animals other than herdmates from their prem
438	Identification	One of the goals of NAIS is 48-hour traceback after the discovery of a disease outbreak.
439	Identification	A premises is defined as a location where animals are raised, held, or boarded.
440	Showing	In showmanship, exhibitors are expected to have a show halter, showstick, and scotch comb.
441	Showing	When traveling it's very important to bring calf's registration papers (if available), bill of sale, brand inspection, and health inspection papers (depending on state requirements).
442	Showing	A blocking chute is a metal or aluminum structure with a headgate used to restrain animal while fitting or clipping.
443	Showing	A show halter is a leather halter used only when showing an animal.
444	Showing	A blower is an electric unit used to dry an animal or to blow out dirt before fitting.
445	Showing	A show box is a wood, aluminum, or plastic box used to store show products and other tools needed at a show.
446	Showing	When you lead an animal in the show ring, you should be on the animal's left side.
447	Showing	A show stick is an instrument used for setting up cattle's feet in the show ring.
448	Showing	In a showmanship contest, the exhibitor is evaluated on their overall ability to effectively present their animal in the ring.
449	Showing	An animal's "bloom" refers to the desirable condition of skin & hair.

450	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.
451	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 to
452	Consumer Information	May is traditionally the month when beef and the beef industry is recognized.
453	Consumer Information	Beef consumption in the U.S. s per person per year is second to poultry.
454	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.
455	Consumer Information	* A 100 grams serving of lean beef has approximately the same amount of cholesterol as 100 grams of either fish or chicken.
456	Consumer Information	Proteins from all meat are at least 97% digestible and meat fat is at least 96% digestible.
457	Consumer Information	Protein from meat is higher quality (a complete protein) than protein from a plant source (incomplete protein)
458	Consumer Information	GMOs “Genetically Modified Organisms” are organisms that have had their genome modified artificially by genetic engineering.
459	Consumer Information	Meat provides “heme” iron, which is better absorbed by the body than non-heme iron from plant foods.
460	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.
461	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.
462	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.
463	Consumer Information	By law, ground beef can contain no more that 30% fat.
464	Consumer Information	Between 40 and 45% of all beef sold today is in a 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.

465	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.
466	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 takes into account a dam's age in days rather than in rounded years.
467	Calculations	ADG is the abbreviation for Average Daily Gain.
468	Calculations	The equation for Weight per Day of Age (WDA) is: the animal's current weight divided by its age in days.
469	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.
470	Calculations	** Adjusted weaning weight equation: $\text{Adj. 205} = ((\text{Actual Weaning Weight} - \text{Actual Birth Weight}) / \text{Age in days at Weaning}) * 205 + (\text{Birth Weight} + \text{Age of Dam Adjustment})$
471	Calculations	** Adjusted yearling weight equation: $\text{Adj. 365 weight} = ((\text{Actual Yearling Weight} - \text{Actual Weaning Weight}) / \text{Number of days between weights}) * 160 + \text{Adj. 205 day weight}$
472	Calculations	* The three things that actual weaning weight is normally adjusted for are age of calf, age of dam, and hybrid vigor.
473	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.
474	Calculations	** Percent calf crop weaned per cow exposed = $(\text{Calves weaned} / \text{Number of cows exposed}) \times 100$
475	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.
476	Calculations	* When adjusting weaning weights (205 day weight) the following factors are used to make these adjustments: dams age, age of calf and the sex of the calf.
477	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
478	Carcass/Slaughter	USDA quality grades for young, "A" maturity beef are: Prime, Choice, Select and Standard.
479	Carcass/Slaughter	The beef carcass is divided into four primals: chuck, round, rib and loin.
480	Carcass/Slaughter	When evaluating cattle, external fat is referred to as fat cover, finish or condition.

481	Carcass/Slaughter	There are 5 USDA Yield Grades (1,2,3,4,5).
482	Carcass/Slaughter	The USDA Yield Grade system provides an estimate of the cutability of a carcass.
483	Carcass/Slaughter	Cutability is the proportion of lean salable meat yielded by a carcass.
484	Carcass/Slaughter	A Yield Grade of 1 is the highest cutability as opposed to a Yield Grade of 5 that is the lowest.
485	Carcass/Slaughter	To insure wholesomeness, inspection is mandatory by the federal government in all commercial slaughter plants.
486	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.
487	Carcass/Slaughter	**USDA feeder cattle yield grades are based upon frame size and muscling.
488	Carcass/Slaughter	The forequarter of a beef carcass is heavier than the hindquarter.
489	Carcass/Slaughter	Slaughter veal is not yield graded.
490	Carcass/Slaughter	Fat is necessary as an outside cover of a carcass to protect it during normal storage and handling.
491	Carcass/Slaughter	Heifers have the lowest lean to fat ratio.
492	Carcass/Slaughter	Cattle should be off feed at least 12 hours before slaughter.
493	Carcass/Slaughter	** 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 are all evaluation points used to determine maturity of a carcass.
494	Carcass/Slaughter	Intramuscular fat is also known as marbling.
495	Carcass/Slaughter	Intermuscular fat is known as seam fat.
496	Carcass/Slaughter	Fat measurements are usually taken on cattle at the 12th rib; 3/4 distance of medial to lateral end of ribeye.
497	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.
498	Carcass/Slaughter	Tenderness, juiciness, and flavor are three factors that influence the palatability of meat.
499	Carcass/Slaughter	Veal is the meat of calves butchered under 300 pounds.
500	Carcass/Slaughter	Meat is approximately 60 percent water.
501	Carcass/Slaughter	Fatness, muscling, and weight are the three main factors affecting yield grades.
502	Carcass/Slaughter	It costs the beef industry \$2 billion per year to remove excess fat from beef carcasses.
503	Carcass/Slaughter	Age of the animal and days on feed are better indicators of overall palatability than marbling.

504	Carcass/Slaughter	* The term "70-70-0" applies to packers and feeders that would ideally like 70% of all fed cattle to grade Choice or higher with 70% Yield Grade 1s & 2s and zero out cattle.
505	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 mo
506	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.
507	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.
508	Carcass/Slaughter	There is almost 7 billion pounds of ground beef sold annually; 41% of this is sold through retail stores, 59% is sold through fast food restaurants and other food.
509	Carcass/Slaughter	KPH stands for Kidney, Pelvic, and Heart fat.
510	Carcass/Slaughter	Ribeye area is the only yield grade factor that assesses muscling.
511	Carcass/Slaughter	The normal range for dressing percent of Choice steers is 62-65%.
512	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-primals or retail cuts.
513	Carcass/Slaughter	A non-ambulatory bovine animal is referred to as a downer. Current legislation prevents downer animals in the U.S. food system.
514	Carcass/Slaughter	Injection sites are a condition that puts an animal at risk for residue violation.
515	Carcass/Slaughter	The 9 primary cuts of beef are: round, sirloin, short loin, rib, chuck, flank, short plate, brisket, and fore shank.
516	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".
517	Ultrasound	The approximate correlation between ultrasound carcass data and actual carcass data is 70%.
518	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.
519	Ultrasound	The AGA will accept ultrasound data from any APTC-certified lab.
520	Ultrasound	Ultrasound measurements taken include ribeye area (REA), intramuscular fat percentage/marbling (IMF), rump fat, rib fat, and scan weight.

521	Feedlot	Steers and heifers ready to enter the feedlot for finishing are called feeders.
522	Feedlot	A feedlot consists of a group of pens where steers and heifers are finished for slaughter.
523	Feedlot	Feed efficiency is measured by the pounds of feed required to produce a pound of gain.
524	Feedlot	A realistic figure for a good average daily gain for cattle on feed or in a feedlot would be 3 to 4 pounds.
525	Feedlot	The conditioning process in the growing phase of cattle prior to finishing in the feedlot is called "backgrounding".
526	Feedlot	Three Gelbvieh traits desired by today's feedlot operations are growth, carcass leanness and feed efficiency.
527	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. $TM\ Index = MK\ EPD + \frac{1}{2} WW\ EPD$.
528	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).
529	EPDs	A sire's EPD is a prediction of how his future progeny will perform on a comparative basis with other sires.
530	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 and the American Shorthorn Association just to name a few.
531	EPDs	The Gelbvieh bulls selected as trait leaders are those that ranked the highest in a specific trait.
532	EPDs	* In order to be listed as a Trait Leader, a sire must qualify as a Progeny Tested Sire and have Accuracy in the listed trait of at least .50. Listing for Carcass Traits are slightly different as sire must have either five (5) carcass progeny or 25 female
533	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.
534	EPDs	* A trait ratio of 112 means that the animal is 12% above the average in that trait.

535	EPDs	EPDs on non-parent animals are based on the individual's own record plus pedigree information.
536	EPDs	when evaluating sires to generate replacement heifers, a higher CED value will mean less calving difficulty in those daughters down the road.
537	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.
538	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.
539	EPDs	The AGA's carcass related EPDs incorporate ultrasound data, as well as carcass data collected on a sire's progeny.
540	Bovine Anatomy	* The anatomical structure in cattle that is comparable to the human knee is the stifle.
541	Bovine Anatomy	* The cervix in the cow's reproductive tract creates the most difficulty for the artificial inseminator.
542	Bovine Anatomy	The vulva is the external opening of the vagina.
543	Bovine Anatomy	* The calf fetus develops within layers of membrane called the placenta through which it receives nourishment from the mother.
544	Bovine Anatomy	The stomach of a beef animal has 4 compartments: rumen, reticulum, omasum and abomasum.
545	Bovine Anatomy	* The abomasum (true stomach) portion of a cow's stomach is most similar to the human stomach.
546	Bovine Anatomy	In a beef cow, the rumen compartment of the stomach has the greatest volume.
547	Bovine Anatomy	* Another name for the reticulum (one of the four stomachs of cattle) is honeycomb.
548	Bovine Anatomy	A cow has no upper incisors.
549	Bovine Anatomy	* The esophageal groove in calves allows milk to bypass the rumen and reticulum for digestion in the abomasum.
550	Bovine Anatomy	The cecum is located in the first section of the large intestine.
551	Bovine Anatomy	In referring to cattle, the term "hooks" refers to hipbones.
552	Bovine Anatomy	The dewlap is the loose skin that hangs between the throat and brisket on cattle.
553	Bovine Anatomy	The poll is on top of the head.
554	Bovine Anatomy	The dewclaw is above the pastern on the back of the leg.
555	Bovine Anatomy	Femininity is the refined appearance of a female while masculinity is the rugged appearance of a male.

556	Bovine Anatomy	Both characteristics, femininity and masculinity are usually evaluated by observing the head, neck and shoulder region.
557	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.
558	Bovine Anatomy	"Post legged" refers to an animal with straight back legs.
559	Bovine Anatomy	"Parrot mouth" is a condition when the top jaw overlaps the lower jaw.
560	Bovine Anatomy	A scur refers to a rudimentary horn growth that may or may not become attached to the skull at maturity.
561	Bovine Anatomy	Conformation is the physical form of an animal; its shape and arrangement of parts.
562	Bovine Anatomy	Two of the best places on a calf that indicate natural muscling are the lower round and the forearm.
563	Bovine Anatomy	The amount of fat on a market animal is called finish.
564	Bovine Anatomy	Tripe is made from the rumen of a bovine.
565	Bovine Anatomy	* Peristalsis is the name for the rhythmic muscular contractions which occur in the rumen.