

1	1	People and Places	Lynn Valentine is the Gelbvieh Media Productions Coordinator and Gelbvieh World Graphic Design and Publication Coordinator.
2	1	People and Places	The current Data Services Coordinator is Taylor Buckley
3	1	People and Places	Jake Renner is the current Member and Youth Activities Coordinator.
4	1	People and Places	The AGA office is moving to Lincoln, Nebraska in the summer of 2019.
5	1	People and Places	The following is a list of the current AGA Board of Directors: John Carrel, Dan McCarty, Klint Sickler, Walter Teeter, Dustin Aherin, Jeff Loveless, Lowell Rogers, Todd Bickett, Derek Martin, Randy Sienknecht, Leland Clark, Lori Maude, Doug Hughes, Andrea Murray, and Jeff Swanson
6	1	People and Places	The current AGA President is John Carrel.
7	1	People and Places	Megan Slater is currently the Interim Executive Director of the AGA
8	1	People and Places	The current members of the AGA Executive Committee are: John Carrel, President; Dan McCarty, Vice President; Klint Sickler, Secretary, Walter Teeter, Treasurer.
9	1	People and Places	The current AGJA Board of Directors include: Grace Vehige, Grady Hammer, Colton Ivers, Danielle Stock, Anna Ring, Alexx Starr, Jacob Barwick, Kallie Mattison, Wyatt Forbes, and Jesse Henson.
10	1	People and Places	Grace Vehige is the current AGJA President.
11	1	People and Places	The ex-officio for the AGJA Board of Directors is Jesse Henson.
12	1	People and Places	Tom Strahm is the current AGA Director of Commercial Marketing.
13	1	People and Places	The current Junior Gelbvieh Youth Ambassador is Cameron Nowack and the current Intermediate Gelbvieh Youth Ambassador is Addison Starr.
14	1	People and Places	AGJA advisors are Emily Griffiths-Schilling and Andrea Murray
15	1	People and Places	Will Fiske is the current Breed Growth Specialist.
16	1	People and Places	Rebecca Mettler is the current Gelbvieh World Editor.
17	2	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	2	Trivia	*During grazing season, a calf deposits more than 531 pounds of manure. This amount includes over 21 million worm eggs.
19	2	Trivia	Christopher Columbus was a famous explorer who brought cattle from Spain to the West Indies on his second voyage to America.
20	2	Trivia	The AGA website address is <a href="http://www.gelbvieh.org">www.gelbvieh.org</a>
21	2	Trivia	Mature cows have four compartments to their stomach.
22	2	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	2	Trivia	A calf is approximately 70% water at birth.

			* 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.
24	2	Trivia	
25	2	Trivia	Romans were the first known persons to brand cattle.
26	2	Trivia	Hamburger got its name from Hamburg, Germany and was brought to the U.S. by German immigrants in the 1800's.
27	2	Trivia	The average American eats 156 burgers each year.
28	2	Trivia	The biggest burger in the world weighed 6,040 pounds and was cooked in Montana.
29	2	Trivia	One gallon of milk weighs 8.6 pounds.
30	2	Trivia	On average, a dairy cow produces 90 glasses of milk daily, depending on genetics, feeding practices, and weather.
31	2	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	2	Trivia	The average cow has more than 40,000 jaw movements per day.
33	2	Trivia	The U.S. nickname Uncle Sam is 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 Wilsons 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	3	Statistics	In 2017, the average age of a beef producer was 58.
35	5	Statistics	U.S. commercial cattle live weight at slaughter in 2018 was 1,350 lbs.
36	3	Statistics	Cattle consume less than 2/10ths of 1% of all water used in the United States
37	3	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	3	Statistics	There are 1.4 million jobs attributed to the beef industry.
39	3	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	3	Statistics	Traditionally, the two largest dairy states are California and Wisconsin
41	3	Statistics	The beef industry is the single largest segment of American agriculture, which is our nation's largest industry.
42	3	Statistics	The two largest (based on circulation) beef magazines in the United States are: Beef and Drivers.

43	3	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	3	Statistics	26% of the earth's surface is used for livestock grazing.
45	3	Statistics	As of September 2019, the top ten states for AGA (adult) memberships were: Missouri, Kansas, Kentucky, Iowa, Tennessee, South Dakota, Nebraska, Colorado, Oklahoma, and North Carolina.
46	3	Statistics	As of September 2018, the top ten states for AGJA memberships were: Kansas, Missouri, Oklahoma, Nebraska, Iowa, Colorado, Texas, South Dakota, Kentucky, Mississippi.
47	3	Statistics	In the 2017-2018 year, the top five states of AGA active females are: Kansas, Missouri, Nebraska, South Dakota, North Dakota.
48	3	Statistics	The top five states for total animals registrations for the 2017-2018 fiscal year are: Kansas, Missouri, Nebraska, South Dakota, North Dakota
49	3	Statistics	In the 2017-2018 fiscal year, the total active animals represented in the annual herd assessment was 37,917.
50	3	Statistics	The average herd size for AGA members is 39.6 cows.
51	3	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	3	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	3	Statistics	Cattle numbers in the U.S. peaked in 1975 at 132 million head.
54	3	Statistics	The Holstein breed has the largest number of registered cattle in the United States.
55	3	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	4	AGA Policy	Genetic defects can be classified as monitor, warning, or watch status by the AGA.
57	4	AGA Policy	** All AI sires and Donor Dam must be tested for the following genetic conditions: Arthrogyrosis Multiplex (AM), Neuropathic Hydrocephalus (NH) and Osteopetrosis (OS), Developmental Duplication (DD).
59	4	AGA Policy	Any abnormalities in Gelbvieh cattle should be reported to the AGA using an Abnormal Calf Report.
60	4	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	4	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	4	AGA Policy	Information like birth weight, weaning weight, yearling weight and other information on cattle is submitted to the AGA to be processed.
63	4	AGA Policy	The American Gelbvieh Association allows only replication cell-cloned animals to be eligible for registration.
64	4	AGA Policy	As of December 2016, cell-donor animals must be tested with the Genomic Option #1 (GGP-HD) and for all monitored genetic conditions.
65	4	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	4	AGA Policy	The International Year Codes for this year and the next three years are as follows: 2019--G, 2020—H, 2021-J, 2022-K
67	4	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	4	AGA Policy	The AGA considers females with at least 81.6% Gelbvieh blood to be purebred.
69	4	AGA Policy	The AGA considers bulls with at least 81.6% Gelbvieh blood to be purebred.
70	4	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	4	AGA Policy	A.I. sires must be DNA typed ( <b>GGP-HD</b> ), 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.
72	4	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.
73	4	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.

74	4	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 eights 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.
75	5	AGA Fees	To register cattle with the AGA, individuals must have an active membership AND have paid annual Herd Assessment dues.
76	5	AGA Fees	AGA members receive a free subscription to Gelbvieh World magazine.
77	5	AGA Fees	The Herd Assessment rate is \$25.00, yearly, for females over 13 months of age, as of January 1 of each year.
78	5	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.
79	5	AGA Fees	A one-year subscription for Gelbvieh World is \$35.00.
80	5	AGA Fees	Members have 30 days to pay their bill before their account becomes locked.
81	5	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.
82	6	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.
83	6	AGA Registration	The AGA defines a breeder as the owner of the dam, at the time of conception, of the animal being registered.
84	6	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.
85	6	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.
86	6	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.
87	6	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.
88	6	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.

89	6	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.
90	6	AGA Registration	Calf registration can be submitted to the AGA via traditional paper forms and AGA's Online Registry System
91	6	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 any time.
92	7	AGA Membership	A herd prefix is a breeder's choice of 3 or 4 letters used to tattoo animals produced in his operation.
93	7	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.
94	7	AGA Membership	*The cost to reactivate a female taken off the Herd Assessment Inventory is \$25.00 for each year the cow has been off the inventory. For example, if a cow was left off the inventory for one year, the cost is \$25 to reactive her.
95	7	AGA Membership	The age requirement for membership in the AGJA is birth through 21, as of January 1, of the current year.
96	7	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.
97	7	AGA Membership	An AGA membership fee is \$120 for the first year, and \$120 annually. This fee includes a subscription to the Gelbvieh World.
98	8	Organizations	MARC stands for Meat Animal Research Center.
99	8	Organizations	USDA refers to the United States Department of Agriculture.
100	8	Organizations	NCBA stands for National Cattlemen's Beef Association and it is a member organization representing U.S. beef producers.
101	8	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.
102	8	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.
103	8	Organizations	National Cattlemen's Beef Association is commonly referred to as NCBA
104	8	Organizations	R-CALF stands for the Ranchers and Cattlemen's Action Legal Fund. The national R-CALF headquarters is in Billings, Montana.
105	8	Organizations	YBIC stands for the Youth Beef Industry Congress.
106	8	Organizations	BIF stands for Beef Improvement Federation and was chartered in 1968.
107	8	Organizations	The primary purpose of the BIF is to develop procedures for evaluating breeding value of beef animals.

108	8	Organizations	Cattle-Fax, located in Centennial, Colorado, is a market reporting organization that supplies information on market outlook and market inventory.
109	8	Organizations	The Federal Meat Grading Service was established in 1925.
110	8	Organizations	APHIS is the Animal and Plant Health Inspection Service.
111	8	Organizations	The headquarters for the National Cattleman's Beef Association (NCBA) is in Centennial, Colorado.
112	8	Organizations	The National Beef Cook-off is sponsored by the American National CattleWomen's Association.
113	8	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.
114	8	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.
115	8	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.
116	8	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?
117	8	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.
118	8	Organizations	The Gelbvieh World magazine is a member of LPC, Livestock Publications Council.
119	9	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.
120	9	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.
121	9	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.
122	9	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.

123	9	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.
124	9	Food Safety	The three keys to eliminating the majority of food borne illnesses are: proper handling, storage and preparation.
125	9	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).
126	9	Food Safety	According to the Centers for Disease Control and Prevention (CDC) the incidence of bacteria on meat products decreased significantly. The incidence of E. coli O157:H7 in ground beef samples tested by USDA declined 80% since 1999.
127	10	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.
128	10	Animal Health	The term "scour" means persistent diarrhea.
129	10	Animal Health	The disorder characterized by gas distention of the rumen as seen on an animal's left side is bloat.
130	10	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.
131	10	Animal Health	* Bangs is the term cattlemen use for the disease Brucella abortus or brucellosis.
132	10	Animal Health	Both bulls and heifers need to be vaccinated for blackleg.
133	10	Animal Health	Diarrhea, or scours, is often caused by E coli bacteria.
134	10	Animal Health	Bovine Viral Diarrhea is abbreviated BVD.
135	10	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.
136	10	Animal Health	** The bacteria, clostridium chauvei, causes blackleg.
137	10	Animal Health	* Overeating disease is more properly known as Enterotoxemia.
138	10	Animal Health	* Infectious Bovine Rhinotracheitis is abbreviated IBR.
139	10	Animal Health	The mineral most often linked to grass tetany is Magnesium.
140	10	Animal Health	* Brucellosis, anaplasmosis, leptospirosis, BVD, IBR, and vibriosis can cause abortion in cattle.
141	10	Animal Health	The common name for IBR is red nose.
142	10	Animal Health	Ringworm is caused by a fungus and is transmittable from cattle to humans.
143	10	Animal Health	Lockjaw is the common name for tetanus.
144	10	Animal Health	Cattle Grubs are larvae of the Heel Fly.



145	10	Animal Health	The average rectal temperature of beef cattle is 101.0-101.8 degrees F.
146	10	Animal Health	* "White Muscle Disease" is caused by a deficiency of vitamin E, selenium, or both.
147	10	Animal Health	* As a rule, cows that have retained placentas at calving also have more breeding problems.
148	10	Animal Health	** Pinkeye is the common name for the disease "infectious bovine keratoconjunctivitis".
149	10	Animal Health	Warts are contagious to other calves.
150	10	Animal Health	* Most pieces of hardware ingested by cattle settle in the reticulum or second stomach.
151	10	Animal Health	Overeating, drinking too much milk, bacterial infection or viral infection are reasons for scours in calves.
152	10	Animal Health	Mastitis is the broad name used to describe udder infections or disease.
153	10	Animal Health	Within the first 30-60 minutes after calves are born, they should receive colostrum.
154	10	Animal Health	Scours and respiratory pneumonia are the two diseases that cause the greatest loss in young calves.
155	10	Animal Health	After the first 12 hours of life, a calf cannot absorb enough antibodies due to rapid changes in the digestive system.
156	10	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.
157	10	Animal Health	White blood cells help protect the body from disease and infection.
158	10	Animal Health	* Cows and heifers should be vaccinated for BVD at least 30-60 days before breeding.
159	10	Animal Health	* Scours in calves causes rapid dehydration, loss of essential body chemicals and the build-up of acid.
160	10	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 a Midge, which is similar to a Sand Fly.
161	10	Animal Health	The best age to dehorn a calf is from one day to 3 months.
162	10	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.

163	10	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.
164	10	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
165	10	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
166	10	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.
167	10	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
168	10	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
169	10	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.
170	10	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 toes
171	10	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 the belly
172	10	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.
173	11	Reproduction	A cow is "bulling" when she tries to ride other cows or stands while cows try to ride her.
174	11	Reproduction	Estrus or heat is the period in which a female will partake in mating.
175	11	Reproduction	Another term for estrus is "heat".

176	11	Reproduction	A cow in continuous heat due to cystic ovaries or other defects caused by hormonal imbalance is referred to as a "buller".
177	11	Reproduction	Estrous synchronization is the use of hormones to cause a group of cows to come into heat or estrus at the same time.
178	11	Reproduction	Synthetic prostaglandin (lutalyse) products can be used for heat synchronization or inducing abortion in beef cattle if they are pregnant.
179	11	Reproduction	Estrous synchronization with prostaglandin works only in cycling cows.
180	11	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.
181	11	Reproduction	A donor cow provides the embryo for embryo transfers. Donors are typically flushed on Day 7 of a pregnancy.
182	11	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.
183	11	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.
184	11	Reproduction	Liquid Nitrogen is used in semen tanks to keep the semen frozen.
185	11	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.
186	11	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).
187	11	Reproduction	Most Gelbvieh heifers are ready to breed between the ages of 12-14 months.
188	11	Reproduction	A barren cow is a sterile female.
189	11	Reproduction	An open cow should come into heat every 18-21 days.
190	11	Reproduction	The time span that a cow will accept a bull's services is approximately 6-14 hours.
191	11	Reproduction	When a breeder says a cow is "heavy" he means she is in the last trimester of her pregnancy.
192	11	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.
193	11	Reproduction	A mature bull can safely breed 25-35 cows. A yearling bull should be limited to 15-25 cows.

194	11	Reproduction	Cryptorchid refers to male cattle with one or both testicles undescended.
195	11	Reproduction	When a vet says a cow is "safe-in-calf" it means she is pregnant.
196	11	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.
197	11	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.
198	11	Reproduction	The sire determines the sex of the calf.
199	11	Reproduction	Chromosomes are present in the nucleus of each body cell and carry the hereditary material called genes.
200	11	Reproduction	All inherited characteristics are contained in the fertilized egg (embryo).
201	11	Reproduction	Relaxin is the hormone that acts to widen the birth canal before parturition.
202	11	Reproduction	** Fimbria (infundibulum) is the thin membranous structure at the end of the oviduct, which partially covers the ovary.
203	11	Reproduction	A follicle is a structure on the ovary that is the source of the egg at ovulation.
204	11	Reproduction	The major function of the scrotum of a bull is to regulate temperature of the gonads or testicles.
205	11	Reproduction	First calf heifers generally have more difficulty calving than mature cows.
206	11	Reproduction	Testosterone is the hormone responsible for male behavior and sex drive.
207	11	Reproduction	Gomer is the term used for a bull that is used to detect heat but is incapable of settling cows.
208	11	Reproduction	Pelvic size and size of calf are primary factors that affect how easily a female can have a calf.
209	11	Reproduction	Underfeeding heifers during their first year of life will delay their first breeding.
210	11	Reproduction	* Selecting bulls with high calving ease & low birth weight EPDs for use as sires can reduce calving difficulty in heifers.
211	11	Reproduction	* About 12 hours after the end of standing heat ovulation occurs.
212	11	Reproduction	* Fertilization usually occurs in the oviduct of the cow's reproductive tract.
213	11	Reproduction	Parturition is the process of giving birth.
214	12	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.

215	12	Animal Science	Arthrogyrosis 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.
216	12	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.
217	12	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.
218	12	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.
219	12	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.
220	12	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.
221	12	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.
222	12	Animal Science	* Cortisone, a drug used to relieve pain in humans, is made from the gallbladder of a cow.
223	12	Animal Science	* Growth hormone is technically called somatotropin.
224	12	Animal Science	* Growth hormone is secreted from the anterior pituitary gland.
225	12	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.
226	12	Animal Science	Genetics is the name for the study of the laws of inheritance.
227	12	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.
228	12	Animal Science	Heritability is the portion of the phenotypic differences between animals that is due to heredity.
229	12	Animal Science	Cattle cells contain 30 chromosome pairs.
230	12	Animal Science	Birth weights in cattle are moderately to highly heritable.
231	12	Animal Science	An animal is said to be heterozygous for a trait if it carries one dominant and one recessive gene for that trait.

232	12	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
233	12	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.
234	12	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.
235	12	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.
236	12	Animal Science	Genotype is the genetic make-up of an animal.
237	12	Animal Science	Phenotype is the physical appearance of an animal due to genetic and environmental influences.
238	12	Animal Science	Double muscle is the common name for genetic muscular hypertrophy in beef cattle.
239	12	Animal Science	Stomach or intestinal worms can be controlled by medicating an animal's feed.
240	12	Animal Science	Sanitation is the best prevention for flies.
241	12	Animal Science	Grubs are small legless insects that begin as eggs on a calf's leg, move through his body and out his back.
242	12	Animal Science	Lice and flies are the most common external parasites in cattle.
243	12	Animal Science	Late winter or early spring is the best time for lice control.
244	12	Animal Science	The face fly causes economic losses by transmitting pinkeye.
245	12	Animal Science	The immature or larval stage of a fly is a maggot.
246	12	Animal Science	Horn flies affect beef cattle by sucking their blood.
247	12	Animal Science	Face flies and horn flies develop as maggots in freshly deposited cattle manure.
248	12	Animal Science	Lice can cause anemia in cattle by sucking blood out of the animal.
249	12	Animal Science	Warts are caused by a virus.
250	12	Animal Science	The hormone oxytocin primarily causes milk let down.
251	12	Animal Science	* Pheromones are any chemical communication between individuals.
252	12	Animal Science	When a cow is frightened the hormone Epinephrine (adrenaline) is likely to be secreted.
253	12	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.

254	12	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.
255	13	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.
256	13	DNA Testing	*Calpain is a naturally occurring enzyme that contributes a role in beef tenderness by weakening muscle fibers postmortem (after death).
257	13	DNA Testing	*Calpastatin blocks calpain and the role it plays in postmortem tenderization.
258	13	DNA Testing	Current DNA tenderness tests, check for the presence of calpastatin and calpain.
259	13	DNA Testing	Geneseek DNA is the primary genomic testing lab for the AGA.
260	13	DNA Testing	**SNP is a single nucleotide polymorphism. A SNP acts as a pointer for the presence of a gene.
261	14	Nutrition	Examples of protein feeds are soybean meal, alfalfa meal, cottonseed, and alfalfa hay.
262	14	Nutrition	Amino Acids are the building blocks of protein.
263	14	Nutrition	Roughage refers to a bulky feed that is low in energy and high in fiber such as hay.
264	14	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.
265	14	Nutrition	Young cattle use most of their feed for growth and maintenance.
266	14	Nutrition	Mature livestock use most of their feed for maintenance and reproduction, rather than growing.
267	14	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.
268	14	Nutrition	In general, you should start feeding a steer for show at 6-8 months of age.
269	14	Nutrition	Progesterone, estrogen, vitamin D, and aldosterone are all hormones synthesized from cholesterol.
270	14	Nutrition	Net energy is defined as the energy remaining after the deduction of digestive losses, gas losses, urinary losses and the work of digestion.
271	14	Nutrition	Vitamin A is required for the functioning of the eye in the dark.
272	14	Nutrition	A vitamin D deficiency in calves results in rickets.
273	14	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.

274	14	Nutrition	** A cattle liver functions chiefly as an aid to the alimentary canal in nutrient digestion.
275	14	Nutrition	The primary digestive activity that occurs in a cow's rumen is feedstuff fermentation.
276	14	Nutrition	Phosphorus has been called the "master mineral" because it is involved in practically all of the metabolic processes of the body.
277	14	Nutrition	Rennin is the enzyme in a calf's stomach that causes milk to form a curd.
278	14	Nutrition	* Surplus Vitamin A is stored in the liver for up to 90 days.
279	14	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.
280	14	Nutrition	Lactose is the chemical name for milk sugar.
281	14	Nutrition	Maintenance, growth, lactation and reproduction are the four main divisions that feed usage can be categorized into.
282	14	Nutrition	Vitamin A is the most important vitamin for a breeding beef animal.
283	14	Nutrition	Salt and minerals are normally fed free choice to beef cows on pasture.
284	14	Nutrition	Energy, protein, vitamins, minerals and water are the 5 primary nutrients.
285	14	Nutrition	Bacteria and other microbes of the rumen enable cattle to digest cellulose.
286	14	Nutrition	Overfeeding corn to cattle not used to a concentrate feed can cause founder or acidosis.
287	14	Nutrition	Drought is likely to increase nitrate, a toxic factor, in corn silage.
288	14	Nutrition	Calcium is most likely to be deficient with cattle maintained on a high concentrate diet.
289	14	Nutrition	High concentrate feeding is associated with liver abscesses.
290	14	Nutrition	Growth-promoting implants affect feed efficiency.
291	14	Nutrition	*Protein in feed not digested by microbes of the rumen passes to the lower gut for digestion as bypass protein.
292	14	Nutrition	Distiller's grains; Brewer's grains; corn gluten meal and dehydrated alfalfa are high in by-pass protein.
293	14	Nutrition	Nutrient requirements for the pregnant beef cow are highest during the last third of pregnancy.
294	14	Nutrition	It is important to change a cow's feed slowly to give rumen bacteria time to adapt to a new diet.
295	14	Nutrition	Salt is iodized to supply iodine, which helps control goiter, a condition of the thyroid.
296	14	Nutrition	TDN stands for: total digestible nutrients.
297	14	Nutrition	Calcium and phosphorus are minerals essential for proper bone development.



298	14	Nutrition	In drought stunted corn, the largest amounts of nitrate will be found in the stalks.
299	14	Nutrition	Feed is digested in the rumen by bacteria and protozoa.
300	14	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.
301	14	Nutrition	Cows will eat less on a hot summer day.
302	14	Nutrition	Rumination is regurgitation and chewing of the cud.
303	14	Nutrition	Molasses is a good source of energy, which is used in many feeds.
304	14	Nutrition	NPN stands for non-protein nitrogen. Urea is a form of non-protein nitrogen.
305	14	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.
306	14	Nutrition	A feedstuff that has high fiber content would most usually be classified as roughage.
307	14	Nutrition	Lice and worms will cause cattle to be slow gainers.
308	14	Nutrition	Of the classes of nutrients (vitamins, minerals, proteins, carbohydrates, water, and fats) water is the most economical in almost all cases.
309	14	Nutrition	Iron, copper, phosphorus, calcium, and magnesium are examples of minerals.
310	14	Nutrition	White muscle disease is caused by a deficiency of either Vitamin E and/or Selenium.
311	14	Nutrition	* The total amount of water used in on-farm production of grain-fed beef averages 200 gallons per pound of carcass beef.
312	14	Nutrition	Mature cattle consume 8-15 gallons of water per day.
313	14	Nutrition	Feed grains are grains that are not suitable for human consumption, but when fed to animals resulting in highly nutritious nutrients for humans.
314	14	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.
315	14	Nutrition	ZIP is an acronym often used to communicate beef's nutritional value with zinc, iron and protein.
316	14	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.
317	15	Gelbvieh History & Development	Artificial insemination was the technology used to introduce Gelbvieh genetics to the United States.
318	15	Gelbvieh History & Development	Gelbvieh cattle were first imported into the United States in 1972.

319	15	Gelbvieh History & Development	Leness Hall of Carnation Genetics, Washington was the person responsible for first importing Gelbvieh semen to the United States.
320	15	Gelbvieh History & Development	In Germany, Gelbvieh are also called German Yellow.
321	15	Gelbvieh History & Development	The bull stud that brought the first Gelbvieh semen to the United States was Carnation Farms Breeding Service (Carnation Genetics).
322	15	Gelbvieh History & Development	Gelbvieh semen was introduced into the United States in 1971.
323	15	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.
324	15	Gelbvieh History & Development	Gelbvieh cattle originated in the Bavarian area of Germany.
325	15	Gelbvieh History & Development	Gelbvieh cattle were performance tested in Germany for over 110 years.
326	15	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.
327	15	Gelbvieh History & Development	There are full blood, purebred, percentage, hybrid, red, black and polled markers for Gelbvieh and Balancer bulls and females.
328	15	Gelbvieh History & Development	The initials AGA stand for American Gelbvieh Association.
329	15	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.
330	15	Gelbvieh History & Development	The official publication for the AGA is Gelbvieh World.
331	15	Gelbvieh History & Development	The first issue of Gelbvieh World was published in July/August of 1986
332	15	Gelbvieh History & Development	The Gelbray breed was developed by crossing Gelbvieh and Brahman.
333	15	Gelbvieh History & Development	Homer & Dotti Knost, Clinton, Louisiana developed the Gelbray breed.
334	15	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.
335	15	Gelbvieh History & Development	Many Gelbvieh full bloods are horned, with some instances of the polled trait.
336	15	Gelbvieh History & Development	In 1982, John Green, Franklinton, Louisiana was the first to produce a Gelbvieh calf that survived the detailed frozen embryo process.

337	15	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.
338	15	Gelbvieh History & Development	The first AGA president was Gallagher Rule, who also helped start the American Gelbvieh Association.
339	15	Gelbvieh History & Development	Founding memberships for AGA were \$500.00.
340	15	Gelbvieh History & Development	Al and Mary Knapp were the 2018 Hall of Fame Inductees.
341	15	Gelbvieh History & Development	The annual herd summary program was instituted in 1985 to let members report the animals no longer producing in their herds.
342	15	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.
343	15	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.
344	15	Gelbvieh History & Development	The Lifetime Cow Summary reports a cow's progeny performance.
345	15	Gelbvieh History & Development	The Gelbvieh Sire Summary is divided into two sections: Progeny Tested and Genetic Indicator sires.
346	15	Gelbvieh History & Development	The 5 organizers of AGA were Gallagher Rule, Merle Buss, Mitch Dobson, Edd Pritchett and Fred Twietmeyer.
347	15	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.

348	15	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, John Bartee, Wayne Roitsch, Bill Wilkinson, Steve Munger, John Carrel, Jay Johnson, Stuart Jarvis, Vaughn Thorstenson, Al Knapp, Jim Beastrom, Mark Goes, Rob Arnold, Neal Pearson, and Scott Starr.
349	15	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 Bartee, 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..
350	16	Gelbvieh Traits	Problems with pink eye are limited in Gelbvieh cattle due to good pigmentation, which is one of the Gelbvieh traits.
351	16	Gelbvieh Traits	The Gelbvieh disposition is best described by the term "docile".
352	16	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.
353	16	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.
354	16	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.
355	16	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.
356	17	General Cattle Knowledge	In any species of animal, the dam of an offspring is the female parent.
357	17	General Cattle Knowledge	In any species of animal, the sire of an offspring is the male parent.
358	17	General Cattle Knowledge	Cows are female cattle that have produced at least one calf.
359	17	General Cattle Knowledge	Cattle of either sex, under one year of age, are called calves.

360	17	General Cattle Knowledge	WDA is the abbreviation for Weight per Day of Age.
361	17	General Cattle Knowledge	When a cattleman says that a cow has “dropped”, he means she has calved.
362	17	General Cattle Knowledge	A herd sire is a principal breeding bull in the herd.
363	17	General Cattle Knowledge	When a breeder describes a cow as being “broody” he means that she gives the appearance of being a good mother.
364	17	General Cattle Knowledge	The paper that lists the sire and dam of a registered animal is the registration certificate.
365	17	General Cattle Knowledge	Cattle that are genetically hornless are said to be polled.
366	17	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.
367	17	General Cattle Knowledge	In a pedigree, the letters E.T. stand for embryo transfer.
368	17	General Cattle Knowledge	The most commonly used by-product of beef animals is leather.
369	17	General Cattle Knowledge	A herd bull battery consists of bulls in service in a herd.
370	17	General Cattle Knowledge	* *A contemporary group can be defined as a group of animals of a similar age, same sex, and similar management.
371	17	General Cattle Knowledge	Castration refers to the process of removing the testicles.
372	17	General Cattle Knowledge	Cattle futures markets are used to manage price risk in the cattle business.
373	17	General Cattle Knowledge	In any species of animal, the word “progeny” means offspring.
374	17	General Cattle Knowledge	When a breeder says a cow is “open”, he means she is not pregnant.
375	17	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.
376	17	General Cattle Knowledge	Heifers are female cattle that have not born offspring.
377	17	General Cattle Knowledge	Dystocia is another term for difficult calving.
378	17	General Cattle Knowledge	A male bovine animal that has been castrated before sexual maturity is a steer.
379	17	General Cattle Knowledge	A frame six yearling bull has a 51-inch hip height.
380	17	General Cattle Knowledge	Ideally a cow should have a calf each year beginning at two years of age.
381	17	General Cattle Knowledge	Steers and heifers that have been finished for slaughter are referred to as feeder cattle.

382	17	General Cattle Knowledge	A "freemartin" is a sterile heifer born twin to a bull.
383	17	General Cattle Knowledge	Bull calves, in general, are expected to weigh more at weaning than heifers.
384	17	General Cattle Knowledge	* The average generation interval in cattle is 4.5 to 6 years.
385	17	General Cattle Knowledge	* Selection differential is the superiority of parent stock compared to the average of the herd from which they were selected.
386	17	General Cattle Knowledge	Cattle, sheep and goats all belong to the same scientific family grouping in classification.
387	17	General Cattle Knowledge	* Bovidae, meaning hollow horned, is the cattle family classification.
388	17	General Cattle Knowledge	Cattle were first domesticated in the year 7,000 BC
389	17	General Cattle Knowledge	The world's leading country in cattle numbers is India.
390	17	General Cattle Knowledge	Shade and/or cool water are essential for calves in hot weather.
391	17	General Cattle Knowledge	Loss of weight during shipping is called shrink.
392	17	General Cattle Knowledge	A normal amount of shrink to expect is 3-6 percent.
393	17	General Cattle Knowledge	Lactation is the period of time when a cow is producing milking.
394	17	General Cattle Knowledge	Hip height, age and sex are the 3 pieces of data necessary to calculate frame score.
395	17	General Cattle Knowledge	Bulls used for breeding purposes should not be implanted with a growth stimulant because it severely retards testicle development.
396	17	General Cattle Knowledge	The preferred width of handling chutes is 22 to 28 inches.
397	17	General Cattle Knowledge	Most livestock futures are traded at the Chicago Mercantile Exchange.
398	17	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 new born calves, and heritability.
399	17	General Cattle Knowledge	Cattle improve grass growth by aerating the soil with their hooves, allowing oxygen to enter the soil.
400	17	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.

401	17	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.
402	17	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).
403	17	General Cattle Knowledge	Public land is land owned by the local, state, or federal government.
404	17	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.
405	17	General Cattle Knowledge	Rangeland is land on which the native vegetation is predominantly grasses, grass-like plans, forbs, or shrubs, grazed by wild or domestic animals and is managed as natural ecosystem.
406	18	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.
407	18	Breeds	Examples of Continental European breeds are: Gelbvieh, Maine Anjou, Blonde d'Aquitane, Charolais, Salers, Simmental, Chianina, Limousin or Braunvieh.
408	18	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.
409	18	Breeds	Examples of British (English) breeds are: Angus, Hereford, Galloway, Shorthorn, Red Angus, Polled Hereford, South Devon
410	18	Breeds	Any combination of two or more breeds is a crossbred animal.
411	18	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.
412	18	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.
413	18	Breeds	* If a full blood 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.
414	18	Breeds	An animal that has some Brahman blood is referred to as being "eared".
415	19	Breeding Systems	Robert Bakewell was a famous man from Great Britain that first practiced line breeding to produce animals of a fixed type.
416	19	Breeding Systems	The term F1 refers to the first cross of two unrelated pure breeds.
417	19	Breeding Systems	Another term for hybrid vigor is heterosis.

418	19	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.
419	19	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.
420	19	Breeding Systems	Get-of-Sire means calves sired by the same bull.
421	19	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.
422	19	Breeding Systems	Culling is a process of eliminating low quality animals from a herd.
423	19	Breeding Systems	Line breeding is a mating system, which concentrates the inheritance of one or more ancestors in the pedigree.
424	19	Breeding Systems	Inbreeding is mating of closely related animals.
425	19	Breeding Systems	Crossbreeding is mating of animals from different breeds.
426	19	Breeding Systems	An animal whose parents are both of the same breed is considered a "straight-bred."
427	20	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.
428	21	Identification	The permanent identification number in an animal's ear is a tattoo.
429	21	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.
430	21	Identification	Three types of animal identification include ear tag, number brand, and tattoo.
431	21	Identification	Electronic identification by using bar code or radio frequency transmission is known as eID.
432	21	Identification	An animal identification device that contains an electronic chip is known as an eTag.
433	21	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.
434	21	Identification	Source verification is the ability to verify the source of an animal as claimed by the owner or seller.
435	21	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.
436	21	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 herd mates from their prem
437	21	Identification	One of the goals of NAIS is 48-hour traceback after the discovery of a disease outbreak.



438	21	Identification	A premises is defined as a location where animals are raised, held, or boarded.
439	22	Showing	In showmanship, exhibitors are expected to have a show halter, showstick, and scotch comb.
440	22	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).
441	22	Showing	A blocking chute is a metal or aluminum structure with a head gate used to restrain animal while fitting or clipping.
442	22	Showing	A show halter is a leather halter used only when showing an animal.
443	22	Showing	A blower is an electric unit used to dry an animal or to blow out dirt before fitting.
444	22	Showing	A show box is a wood, aluminum, or plastic box used to store show products and other tools needed at a show.
445	22	Showing	When you lead an animal in the show ring, you should be on the animal's left side.
446	22	Showing	A show stick is an instrument used for setting up cattle's feet in the show ring.
447	22	Showing	In a showmanship contest, the exhibitor is evaluated on their overall ability to effectively present their animal in the ring.
448	22	Showing	An animal's "bloom" refers to the desirable condition of skin & hair.
449	23	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	23	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
251	23	Consumer Information	May is traditionally the month when beef and the beef industry is recognized.
452	23	Consumer Information	Beef consumption in the U.S. s per person per year is second to poultry.
453	23	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	23	Consumer Information	* A 100 grams serving of lean beef has approximately the same amount of cholesterol as 100 grams of either fish or chicken.
455	23	Consumer Information	Proteins from all meat are at least 97% digestible and meat fat is at least 96% digestible.
456	23	Consumer Information	Protein from meat is higher quality (a complete protein) than protein from a plant source (incomplete protein)

457	23	Consumer Information	GMOs “Genetically Modified Organisms” are organisms that have had their genome modified artificially by genetic engineering.
458	23	Consumer Information	Meat provides “heme” iron, which is better absorbed by the body than non-heme iron from plant foods.
459	23	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	23	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	23	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	23	Consumer Information	By law, ground beef can contain no more that 30% fat.
463	23	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.
464	24	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	24	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.
466	24	Calculations	ADG is the abbreviation for Average Daily Gain.
467	24	Calculations	The equation for Weight per Day of Age (WDA) is the animal's current weight divided by its age in days.
468	24	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	24	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	24	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	24	Calculations	* The three things that actual weaning weight is normally adjusted for are age of calf, age of dam, and hybrid vigor.
472	24	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	24	Calculations	** Percent calf crop weaned per cow exposed = (Calves weaned/Number of cows exposed) x 100
474	24	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	24	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.
476	24	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	25	Carcass/Slaughter	USDA quality grades for young, "A" maturity beef are: Prime, Choice, Select and Standard.
478	25	Carcass/Slaughter	The beef carcass is divided into 8 wholesale cuts: chuck, rib, loin, round, flank, short plate, brisket, and shank.
479	25	Carcass/Slaughter	When evaluating cattle, external fat is referred to as fat cover, finish or condition.
480	25	Carcass/Slaughter	There are 5 USDA Yield Grades (1,2,3,4,5).
481	25	Carcass/Slaughter	The USDA Yield Grade system provides an estimate of the cutability of a carcass.
482	25	Carcass/Slaughter	Cutability is the proportion of lean salable meat yielded by a carcass.
483	25	Carcass/Slaughter	A Yield Grade of 1 is the highest cutability as opposed to a Yield Grade of 5 that is the lowest.
484	25	Carcass/Slaughter	To insure wholesomeness, inspection is mandatory by the federal government in all commercial slaughter plants.
485	25	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	25	Carcass/Slaughter	**USDA feeder cattle yield grades are based upon frame size and muscling.
487	25	Carcass/Slaughter	The forequarter of a beef carcass is heavier than the hindquarter.
488	25	Carcass/Slaughter	Slaughter veal is not yield graded.
489	25	Carcass/Slaughter	Fat is necessary as an outside cover of a carcass to protect it during normal storage and handling.
490	25	Carcass/Slaughter	Heifers have the lowest lean to fat ratio.
491	25	Carcass/Slaughter	Cattle should be off feed at least 12 hours before slaughter.
492	25	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.
493	25	Carcass/Slaughter	Intramuscular fat is also known as marbling.
494	25	Carcass/Slaughter	Intermuscular fat is known as seam fat.

495	25	Carcass/Slaughter	Fat measurements are usually taken on cattle at the 12th rib; 3/4 distance of medial to lateral end of ribeye.
496	25	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	25	Carcass/Slaughter	Tenderness, juiciness, and flavor are three factors that influence the palatability of meat.
498	25	Carcass/Slaughter	Veal is the meat of calves butchered under 300 pounds.
499	25	Carcass/Slaughter	Meat is approximately 60 percent water.
500	25	Carcass/Slaughter	Fatness, muscling, and weight are the three main factors affecting yield grades.
501	25	Carcass/Slaughter	It costs the beef industry \$2 billion per year to remove excess fat from beef carcasses.
502	25	Carcass/Slaughter	Age of the animal and days on feed are better indicators of overall palatability than marbling.
503	25	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.
504	25	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.
505	25	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.
506	25	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.
507	25	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.
508	25	Carcass/Slaughter	KPH stands for Kidney, Pelvic, and Heart fat.
509	25	Carcass/Slaughter	Ribeye area is the only yield grade factor that assesses muscling.
510	25	Carcass/Slaughter	The normal range for dressing percent of Choice steers is 62-65%.
511	25	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.
512	25	Carcass/Slaughter	A non-ambulatory bovine animal is referred to as a downer. Current legislation prevents downer animals in the U.S. food system.
513	25	Carcass/Slaughter	Injection sites are a condition that puts an animal at risk for residue violation.

514	25	Carcass/Slaughter	The 9 primary cuts of beef are: round, sirloin, short loin, rib, chuck, flank, short plate, brisket, and fore shank.
515	25	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".
516	26	Ultrasound	The approximate correlation between ultrasound carcass data and actual carcass data is 70%.
517	26	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.
518	26	Ultrasound	The AGA will accept ultrasound data from any APTC-certified lab.
519	26	Ultrasound	Ultrasound measurements taken include ribeye area (REA), intramuscular fat percentage/marbling (IMF), rump fat, rib fat, and scan weight.
520	27	Feedlot	Steers and heifers ready to enter the feedlot for finishing are called feeders.
521	27	Feedlot	A feedlot consists of a group of pens where steers and heifers are finished for slaughter.
522	27	Feedlot	Feed efficiency is measured by the pounds of feed required to produce a pound of gain.
523	27	Feedlot	A realistic figure for a good average daily gain for cattle on feed or in a feedlot would be 3 to 4 pounds.
524	27	Feedlot	The conditioning process in the growing phase of cattle prior to finishing in the feedlot is called "backgrounding".
525	27	Feedlot	Three Gelbvieh traits desired by today's feedlot operations are growth, carcass leanness and feed efficiency.
526	28	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.
527	28	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).
528	28	EPDs	A sire's EPD is a prediction of how his future progeny will perform on a comparative basis with other sires.
529	28	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.
530	28	EPDs	The Gelbvieh bulls selected as trait leaders are those that ranked the highest in a specific trait.

531	28	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 females
532	28	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.
533	28	EPDs	* A trait ratio of 112 means that the animal is 12% above the average in that trait.
534	28	EPDs	EPDs on non-parent animals are based on the individual's own record plus pedigree information.
535	28	EPDs	when evaluating sires to generate replacement heifers, a higher CED value will mean less calving difficulty in those daughters down the road.
536	28	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.
537	28	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.
538	28	EPDs	The AGA's carcass related EPDs incorporate ultrasound data, as well as carcass data collected on a sire's progeny.
539	29	Bovine Anatomy	* The anatomical structure in cattle that is comparable to the human knee is the stifle.
540	29	Bovine Anatomy	* The cervix in the cow's reproductive tract creates the most difficulty for the artificial inseminator.
541	29	Bovine Anatomy	The vulva is the external opening of the vagina.
542	29	Bovine Anatomy	* The calf fetus develops within layers of membrane called the placenta through which it receives nourishment from the mother.
543	29	Bovine Anatomy	The stomach of a beef animal has 4 compartments: rumen, reticulum, omasum and abomasum.
544	29	Bovine Anatomy	* The abomasum (true stomach) portion of a cow's stomach is most similar to the human stomach.
545	29	Bovine Anatomy	In a beef cow, the rumen compartment of the stomach has the greatest volume.
546	29	Bovine Anatomy	* Another name for the reticulum (one of the four stomachs of cattle) is honeycomb.
547	29	Bovine Anatomy	A cow has no upper incisors.
548	29	Bovine Anatomy	* The esophageal groove in calves allows milk to bypass the rumen and reticulum for digestion in the abomasum.
549	29	Bovine Anatomy	The cecum is located in the first section of the large intestine.
550	29	Bovine Anatomy	In referring to cattle, the term "hooks" refers to hipbones.

551	29	Bovine Anatomy	The dewlap is the loose skin that hangs between the throat and brisket on cattle.
552	29	Bovine Anatomy	The poll is on top of the head.
553	29	Bovine Anatomy	The dewclaw is above the pastern on the back of the leg.
554	29	Bovine Anatomy	Femininity is the refined appearance of a female while masculinity is the rugged appearance of a male.
555	29	Bovine Anatomy	Both characteristics, femininity and masculinity are usually evaluated by observing the head, neck and shoulder region.
556	29	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.
557	29	Bovine Anatomy	"Post legged" refers to an animal with straight back legs.
558	29	Bovine Anatomy	"Parrot mouth" is a condition when the top jaw overlaps the lower jaw.
559	29	Bovine Anatomy	A scur refers to a rudimentary horn growth that may or may not become attached to the skull at maturity.
560	29	Bovine Anatomy	Conformation is the physical form of an animal; its shape and arrangement of parts.
561	29	Bovine Anatomy	Two of the best places on a calf that indicate natural muscling are the lower round and the forearm.
562	29	Bovine Anatomy	The amount of fat on a market animal is called finish.
563	29	Bovine Anatomy	Tripe is made from the rumen of a bovine.
564	29	Bovine Anatomy	* Peristalsis is the name for the rhythmic muscular contractions which occur in the rumen.