

Breeds

1) Name four breeds of livestock in each of the following classifications: horses, dairy cattle, beef cattle, sheep, hogs, poultry, and goats. Tell their principal uses and merits. Tell where the breeds originated.

Horses

Belgian (from Belgium) - Very strong and heavy horse originally used to carry armored knights into battle. Well tempered and gentle, they train well for work. Now used for draft work on the farm - pulling logs, carts, plows and other tasks that are often done with a tractor.



Dartmoor Pony (from England) - Small (avg shoulder height 4 feet) pony which was used for riding, agricultural work and pulling skips in coal and tin mines. When not needed they were set out to forage on the moors, and so have developed into a breed that can thrive on rough terrain and poor forage. Popular with children's riding because of size, and they are also used for removing invasive plants.



Gotland Horse (from Sweden) - Very old breed of horse that is documented as far back as the Stone Age. Stands about 50" at the shoulder and have a gentle disposition and lively intelligence. They make excellent trotters and jumpers and are used as children's mounts because of their size. Very hardy.



Morgan (from US) - Dark or light brown in color. Advantages of deep muscling, intelligent and strong. On the smaller side. Utility breed that is used for mounted police, range riding, pulling and show. The Morgan is the state animal of Vermont and the state horse of Massachusetts. Morgan horses were used extensively as cavalry mounts in the American Civil War. They have been successfully seen in many disciplines including dressage, show jumping, endurance riding, and pleasure riding.

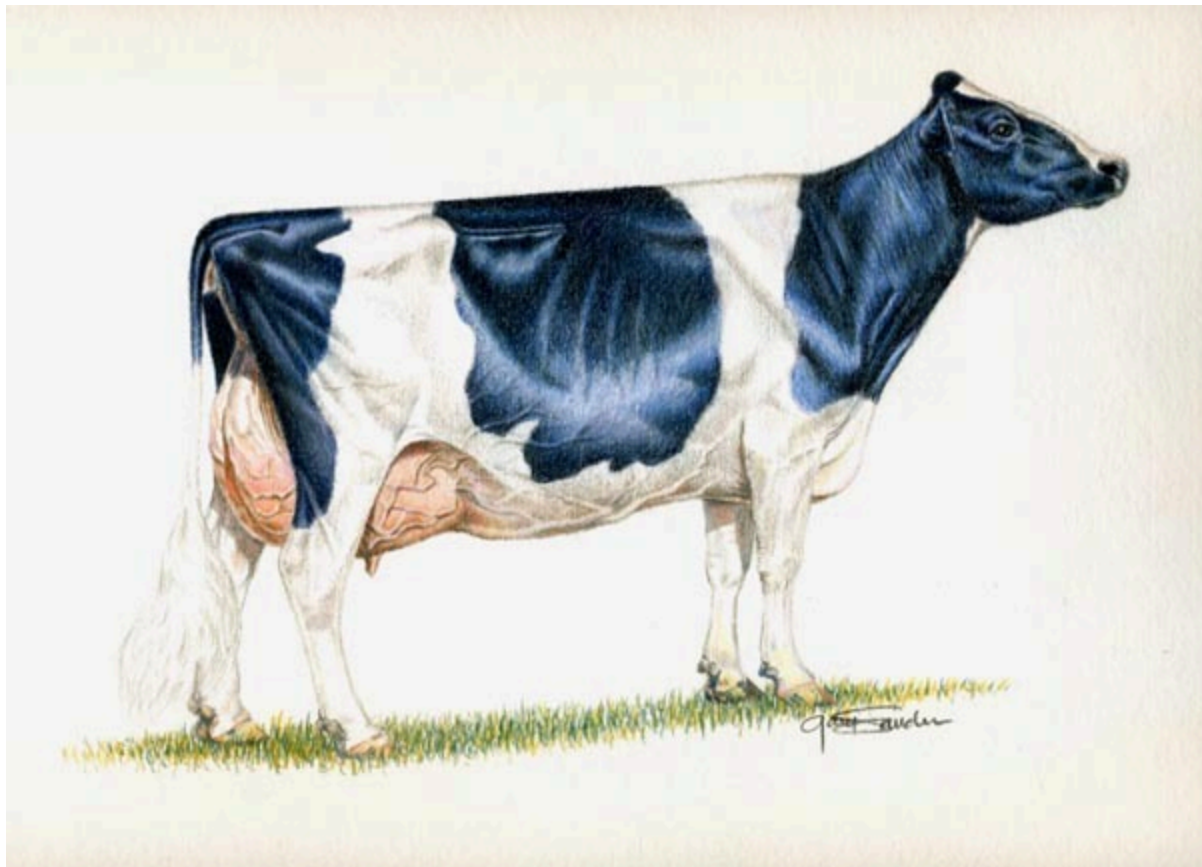


Dairy Cattle

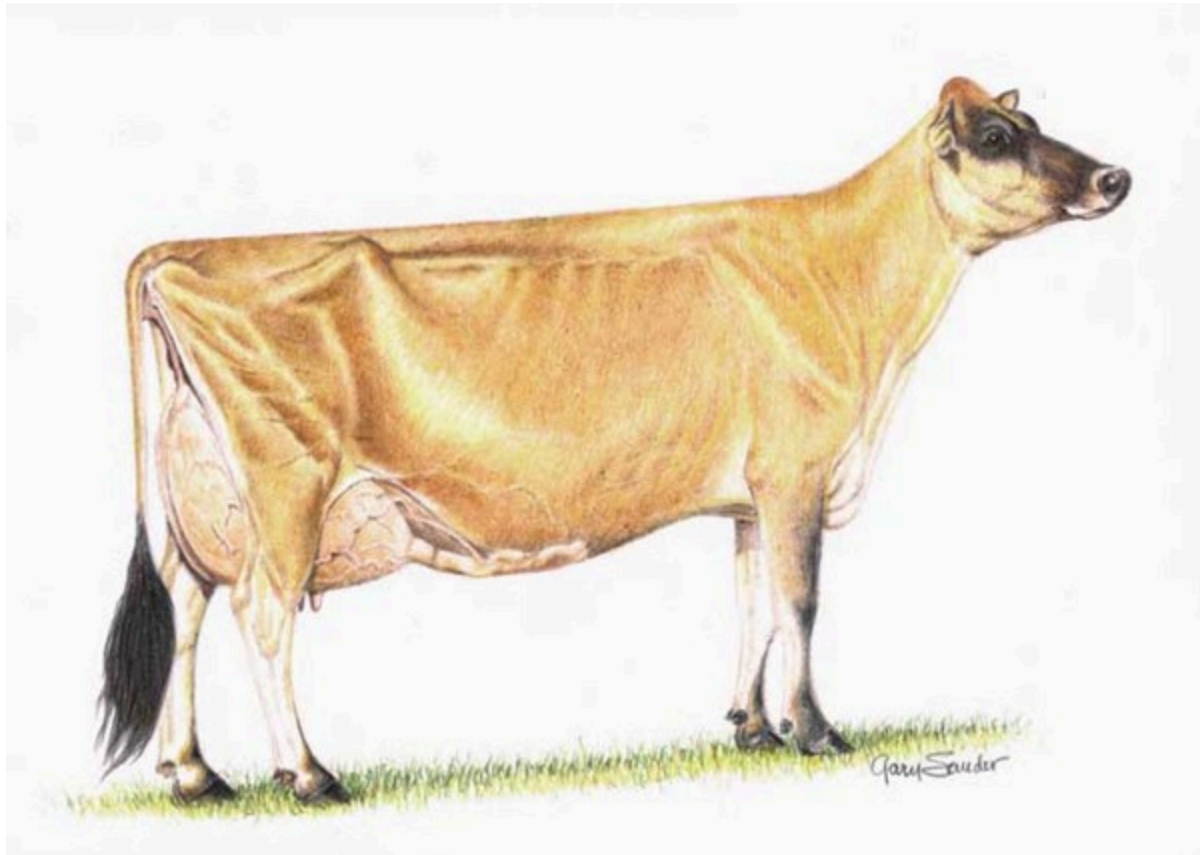
Brown Swiss (from Switzerland) Multi-purpose dairy cow that can also be used for well-tempered and hard-working oxen (males). Robust, prolific breeders, long-lived, adaptable and very well-balanced. Double utility for dairy and beef. Very good for cheese making. Normally large with large ears. They are also very resistant to heat, cold and can survive with very little care and attention.



Holstein (from western Europe). Outstanding milk production. Average productive life (6 years). Known today as the world's highest-production dairy animals. In the United States Holstein's are used exclusively as milking animals. Average lifetime milk production for a Holstein cow stands at approximately 26,000 liters.



Jersey (from France). Much less prone to lameness, relatively small in size(880–1,100 lb). Excellent success calving, and stay productive longer than any other dairy. Popular for the high butterfat content of its milk. Jerseys are adaptable of hot climates and are popular in Brazil as well as in the US.



Milking Shorthorn (from England). Dual breed, very sound animals and very few problems with feet and legs (saves on vet bill and replacement costs). Utility breed with good beef and ox qualities as well. Mature cows average 55in in height and 1,410 to 1,500 lb in weight. High levels of fertility, grazing efficiency, and ease of management that result in the breed being suitable for low-input dairy operations



Beef

Dexter (originated in Ireland)

Dexter cattle are the smallest European breed being about one third the size of a Holstein milking cow. Mature cows weigh between 600-700 lbs. Mature bulls weigh about 1000 lbs. Dexter cows are considered triple purpose animals. Many farmers use them for dairy, beef, and oxen. They are known for easy calving.



Texas Longhorn (from US) Slow to mature, but reproductive period is twice as long as that of other breeds. Natural resistance to most common cattle diseases and parasites. Very lean beef. Despite their intimidating horns Texas Longhorns are a very intelligent and gentle breed.



Murray Grey (originated in Australia): Bulls will typically range in weight from 1800-2500 lbs while cows range from 1100-1500 lbs. Murray Grey cows are very docile but can be extremely protective of their calves. Most Murray Grey cows have a silver coat but their color can range from light grey to almost black.



Galloway (from Scotland) Very docile and courageous - it has been said that they will team up and attack predators to prevent attacks on calves or nearby sheep. Easy calvers, long lived. Galloway cattle are naturally hornless. They have shaggy coats that help them stay warm and shed water and because of this they are well suited for harsh climates. Bulls weigh approximately 1600-1900 lbs while cows weigh approximately 900-1250 lbs.



Sheep

Romney. Raised for both meat and wool. These sheep produce either colored or white wool. Ewes are typically 140 lbs or more while rams typically weigh 200 lbs or more. Romney sheep produce a thick heavy wool. A healthy mature sheep can yield at shearing upwards of 10 kg of wool per year.



Coopworth: Raised for both meat and wool. The fleece produced by a Coopworth sheep is fairly coarse and weighs on average 5 kg. The live weight of an adult Coopworth is approximately 120 lbs. Coopworths are easy lambers and are excellent mothers.



Karakul (Originated in Asia) Raised for milking, meat, pelts, and wool. Karakul fiber is relatively coarse and is usually used for outer garments, carpets, and for felting. Karakul sheep are well known for their ability to forage and thrive in harsh conditions



Cheviot (from the UK) Raised for both meat and wool. Commonly found in the United Kingdom, Scotland, and Wales as well as more rarely in New Zealand, Australia, and The United States.



Hogs

Tamworth (Originally from Tamworth, UK) One of the oldest breeds of Pigs. Not well suited to modern production methods. Full grown boars range in size from 550-820 lbs while full grown sows range in size from 440-660 lbs. Litters typically range in size from 6-10 piglets. Sometimes called a bacon pig because of its ability to achieve high body weight without much actual fat.



Berkshire (Originating in Berkshire England) This rare breed of pig is highly prized for its culinary applications. Berkshire pork is considered exceptionally juicy, tender and is heavily marbled. The Berkshire pig is listed as vulnerable. As of 2008 only 300 breeding sows were known to exist.



Duroc This breed of American domestic pig forms the basis of many mixed breeds of commercial hogs. Durocs are used predominantly as sires (boars), and are appreciated for their hardiness and quick but thorough muscle growth. Duroc hogs tend to be one of the least aggressive of all of the swine breeds.



Yorkshire (originating in Yorkshire, England) One of the most common breeds in the world. Is used extensively in commercial swine breeding. The Yorkshire is a rugged and hardy breed and has shown itself able to withstand variations in climate and other environmental factors.



Poultry

Silver Laced Wyandotte The first examples of this breed originated in the 1870s. Silver Laced Wyandottes are an excellent dual purpose breed kept for both meat and eggs. Wyandotte hens typically lay brown or tan eggs and usually have a white ring of feathers around their neck. Silver Laced Wyandottes usually have speckled black and white plumage and yellow feet.



Araucana These chickens are very well known for their blue eggs. Chickens that do not meet the specific American Poultry Association standards are known as Easter Eggers. The American Poultry Association specifies that Araucana chickens must be medium sized birds without tails, possess ear-tufts (feathers that grow out from near the birds' ears) and lay blue eggs. Araucana hens typically weigh 5-6 lbs.



Black Langshan These chickens are large hearty birds with hens weighing in around 7.5 lbs. They are originally from China and were imported to England in the 1870s. Langshan chickens lay dark brown eggs sometimes with a purplish tint. Black Langshans are kept for both eggs and meat.



Orpington: Orpington chickens are known for their excellent egg production and rapid rate of growth. They are kept for both eggs and meat and lay large to extra large brown eggs. Full sized adult Orpingtons weigh in around 7.5 -8 lbs.



Barred Rock: The Barred Rock, also known as the Plymouth Rock, was developed in the late 1840s and shown for the first time in Boston, MA. These birds are one of the most popular and successful breeds of chicken ever to have existed. They are very productive, docile, hearty, and are widely considered to have good tasting meat. Barred rock hens grow to weigh approximately 7.5 lbs.



Goats

Angora (from Turkey) - The Angora or Ankara[a] is a Turkish breed of domesticated goat. It produces the lustrous fiber known as mohair. It is widespread in many countries of the world. A moderately small goat. It is slender, elegant and light-framed; the head is small, with semi-lop ears. It is usually horned; in billies the horns are commonly twisted, long and strong. With the exception of the face and legs, the animal is entirely covered in a coat of long ringlets of fine and lustrous mohair. This is not goat hair as seen on other breeds, but the down or undercoat which, in this breed only, grows much longer than the outer hair coat. A single goat



produces between four and five kilograms of hair per year. Angoras are shorn twice a year.



Alpine (from France) - A medium to large sized breed of domestic goat known for its very good milking ability. The breed originated in the French Alps. Alpine goats are heavy milkers. The milk can be made into butter, cheese, soap, ice cream or any other dairy product normally made from cow's milk. They are often used for commercial dairy production, as well as homestead milk goats. They have erect ears and a straight profile, and are described as being "alertly graceful" with the ability to adapt to any climate thanks to their hardy

nature. Alpine goats are friendly and highly curious, however they can be independent and strong-willed

Nigerian Dwarf (from America) - Like the American Pygmy Goat, it derives from the West African Dwarf group of breeds of West Africa. It has been bred to have the appearance of a miniature dairy goat. It was at first reared as a show breed and companion animal; selection was for appearance and for docility. It was later found to be suitable for small-scale dairy production, and some breeding was directed towards dairy qualities. Small but well-proportioned; its conformation resembles that of larger dairy goats. It is a precocious breed.



The Saanen (from Switzerland) It is a highly productive dairy goat and is distributed in more than eighty countries worldwide. The Saanen is the largest breed of Swiss goat. It has white skin and a short white coat. It may be horned or hornless, and tassels may be present. The profile may be straight or somewhat concave; the ears are erect and point upwards and forwards.

Online Breed Resources:

http://en.wikipedia.org/wiki/List_of_pig_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

http://en.wikipedia.org/wiki/List_of_sheep_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

http://en.wikipedia.org/wiki/List_of_horse_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

http://en.wikipedia.org/wiki/List_of_cattle_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

http://en.wikipedia.org/wiki/List_of_chicken_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

https://en.wikipedia.org/wiki/List_of_goat_breeds

Wikipedia listing of the breeds which can be sorted by various categories. Good links to various breeds and can be used as general background information.

<http://www.ansi.okstate.edu/breeds/>

Database by the Oklahoma State University on many breeds. Their poultry database is part of another project (see below link)

<http://www.ansi.okstate.edu/breeds/poultry/index.htm>

Oklahoma State University poultry database project. Seems to be incomplete with some breeds missing. Good general information for those breeds listed.

<https://www.mcmurrayhatchery.com/index.html>

Catalog listing has several breeds and information.

Citations: All photographs and information are taken from wikipedia.com and cowartandmore.com

Diseases

2) List five diseases that afflict the animals in each of the classifications in requirement 1. Also list five diseases of poultry. Describe the symptoms of each disease and explain how each is contracted and how it could be prevented.

notes: distinct symptoms (fever, diarrhea, duration till death - severity, treatment - vaccination or not, location of infection/illness)

Tetanus (bacteria): A serious condition caused by a bacterial infection. The bacteria's scientific name is *Clostridium tetani*. Symptoms include muscle spasms, fever, high blood pressure, trouble swallowing, and fast heart rate. Also known as lockjaw, tetanus can be contracted through a cut or puncture of the skin by a contaminated object. Tetanus can be prevented by immunization from the tetanus vaccine.

Coccidia (parasite): This parasite lives in the intestines of an infected animal. Symptoms include diarrhea, loss of appetite, dehydration, and vomiting. Coccidia is spread through the exposure to, and the ingestion of feces. Regularly changing out bedding and ensuring that food and water cannot be exposed are the most effective measure for preventing the spread of Coccidia.

Anthrax (bacteria): This bacterial infection commonly affects grazing animals. When Anthrax spores are inhaled, eaten, or come into contact with a cut in the skin on a host, they may become reactivated and multiply rapidly. Anthrax does not spread from one infected animal to another. It spreads through spores. Symptoms include difficulty breathing, vomiting, diarrhea, inflammation of the intestines, loss of appetite and painful blisters. Vaccines can help to prevent anthrax.

Malignant Edema (bacteria): Is a typically fatal wound infection most common in grazing animals. It affects [cattle](#), [horses](#), [sheep](#), [goats](#), [pigs](#), and [deer](#). The bacteria that causes a malignant edema (*C septicum*) is found in soil and intestinal contents of animals throughout the world. Infection ordinarily occurs through contamination of wounds. Vaccination against this bacteria is an effective way to prevent malignant edema. Symptoms include anorexia, high fever, intoxication, and death.

Foot-and-mouth disease (virus): This disease can affect all cloven footed animals (animals with hooves). The symptoms of this disease include painful blisters on the tongue, mouth, and between the toes on the feet. Humans can not contract foot-and-mouth disease but it spreads rapidly between animals and can destroy an entire flock of animals. The disease is spread through contact with the infected animal. Vaccination can help to control the spread of the disease but vaccines rarely last more than one year. Rapid detection is the best preventative measure.

Breeding Goals

5) Explain the importance of setting clear goals for any animal breeding program. Tell how purebred lines of animals are produced. Explain the practice of crossbreeding and the value of this practice.

The primary goal of most breeding programs is to produce healthy and profitable animals for use on the farm. Selecting for breeding animals with superior growth rate, egg, meat, milk, or wool production, or with other desirable traits has revolutionized livestock production throughout the world.

Purebred breeding: Mating animals of the same breed for maintaining such breed is referred to as purebred breeding. Opposite to the practice of mating animals of different breeds, purebred breeding aims to establish and maintain stable traits, that animals will pass to the next generation. By "breeding the best to the best," employing a certain degree of **inbreeding**, considerable **culling**, and selection for "superior" qualities, one could develop a bloodline or "**breed**" superior in certain respects to the original base stock.

Crossbreeding: Refers to an organism with **purebred** parents of two different breeds, varieties, or populations. Crossbreeding refers to the process of breeding an organism, often with the intention to create offspring that share the traits of both parent lineages, or producing an organism with **hybrid vigor**. While crossbreeding is used to maintain health and viability of organisms, irresponsible crossbreeding can also produce organisms of inferior quality or dilute a **purebred** gene pool to the point of **extinction** of a given **breed** of organism.

Careers in Animal Science

7) Find out about three career opportunities in animal science. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

Farmer Educator: A farmer educator teaches people about all of the different aspects of life on a farm. A farmer educator typically will have a college degree in science, environmental, agricultural, and/or educational fields. Experience and interest working with kids and animals in the outdoors is a must.

Veterinarian: A veterinarian works to prevent and treat animal sickness. A vet must have a college degree in science or animal science and a masters degree in animal medicine. Extensive amount of training is needed to become a vet. Veterinarians must be certified and licensed to practice medicine.

Food processors, meat packers, and related industries seek persons with meat science background for positions in management, product and process development, purchasing, quality assurance, technical and consumer services, advertising, and sales.

Government agencies employ persons with undergraduate or advanced training in the animal sciences as administrative or technical specialists in livestock marketing, forecasting, environmental regulation, animal health, disease control, meats inspection, and public information.

Universities, colleges, and other educational organizations employ persons with advanced animal sciences training as teachers, researchers, laboratory technicians, and extension specialists