



JR

ANIMAL SCIENTIST

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What's in a breed?

The stories behind the animal breeds we love!

How did we get different animal breeds?

Dogs, cattle and chickens all have something important in common! They are all **domesticated** animals. That means they have been bred by people for a specific reason. We breed dogs as pets and to do jobs like herd sheep. We breed cattle to give us milk and meat. And we breed chickens to give us eggs and meat.

Animal breeding brings us our favorite pets — and important nutrition from farm animals. But how does breeding work?

Humans have bred animals for thousands of years. Breeding is when a person chooses a male animal and a female animal to have babies, also called offspring. For example, livestock producers breed bulls with cows to get calves.

Breeding is also about **selecting** animals that have **traits** we want.

For example, some cows make more milk than other cows. Thousands of years ago, humans saw those cows with lots of milk and bred them to make offspring. When these new offspring grew up, they could also make more milk than other cows. They had inherited this trait. Over time, people started thinking of these cattle as a separate breed. They were dairy cattle! Today, there are many different breeds of dairy cattle.

We can see other examples of animal breeding every day! Visit a dog park and you'll see dogs that have been bred to be different sizes and colors. Check out a chicken coop, and you'll often see hens bred to produce a lot of eggs. These breeds are called "layer" hens.

Animal scientists study different animal breeds and work to make them even healthier and more productive!



Holstein cattle are easy to spot! They are known for their black and white splotches! Holsteins have been bred as a dairy breed of cattle. They make a lot of milk! In fact, there's a good chance the milk you drink comes from a Holstein.

What is a trait?

A trait is a word we can use to describe an animal! For example, the Holstein cow on the opposite page has the trait of black and white spots. Chihuahuas have the trait of being very small! Not all traits are things we can observe. Some animals have the trait of being able to not get sick very easily. Other animals have the trait of being able to have a lot of babies.

Traits are often **inherited**, or passed along, from an animal's parents.

You have traits too! Your eye color, hair color and height are all examples of traits!

WORD WATCH

Look for these terms in this issue of Jr. Animal Scientist:

Cross: When two animal breeds are bred together. Over time, crosses can become their own breed.

Inherited traits: Traits that come from an animal's mother and father. These traits can affect how an animal looks and acts. They are passed along through molecules in the body called DNA.

Selection: Picking a male and female animal for breeding. These animals are picked for breeding because they have a trait that would be helpful to pass onto the offspring.

FUN FACT:

There are more than 1,000 cattle breeds around the world! Some are raised for milk, some are raised for meat, and some are raised for both. The largest breed is the Chianina, a cattle breed raised for meat and as a working animal to pull farm machinery.



Three Fascinating Livestock Breeds

Photo: iStock / Lyndseyk



Just like you, horses need to get a mixture of foods to stay healthy. But for horses, all those foods are plants!

Quarter Horses

Quarter Horses are the most popular horse breed in the world! They are an interesting breed because they are a **cross** between four different horse breeds! Before there were Quarter Horses, there was a breed of horse called a Spanish Barb. The Spanish Barb was bred more than 1,000 years ago!

Then in the 1500s, colonists from Spain brought Spanish Barb horses to North America. Over the years, these Spanish Barbs were bred with three other horse breeds that colonists also brought over from Europe!

Quarter Horses have several useful traits! They are known for being easy to train, and they are good at running quickly over short distances. In fact, they got the name “quarter” horse because they are said to outrun other horse breeds when running a quarter of a mile.

Duroc Pigs

Many people think pigs are pink, but pig breeds come in all different colors. One popular breed is the Duroc pig. Duroc pigs can be easy to spot! They are usually reddish brown and tend to have ears that flop over.

This breed has an interesting history! About 200 years ago, many farmers in the states of New York and New Jersey raised red hogs for their meat. When they **selected** hogs for breeding, they chose hogs that were very large. These hogs produced more meat! They also selected hogs that had large litters of piglets. These traits made the hogs very productive on the farm.

Then in 1823, a red boar (a male pig) was brought to New York from a breeder in England. This boar was selected for breeding because he grew quickly and put on muscle. Breeders thought this boar would pass on these useful **traits**! This pig was bred with the red hogs in the area, and their piglets became known as Duroc pigs.

Photo: iStock / acceptfoto



Duroc pigs are also special because their thick coats and tough skin help keep them happy during cold winters.

Broad Breasted White turkey

Wild turkeys tend to have brown, black and white feathers, which they use to blend into their surroundings. When farmers began raising their own flocks of turkeys, they started selecting white turkeys for breeding. This was because the meat from brown and black turkeys had small brown and black dots. These dots are called pin feathers, and they are harmless.

People who bought turkey meat didn't want to see these pin feathers in their meat. So turkey breeders selected birds with only white feathers for breeding. These turkeys only produced meat with white dots, which people liked better. Over time, farmers bred more and more turkeys with only white feathers. These white breeds, like the Broad Breasted White turkey, were raised to make grocery shoppers happy with how their meat looked!



Photo: iStock / erne

Did you know? Male turkeys are called Toms!

More about traits!

Many traits are passed down from an animal's parents, but some traits are said to "skip" a generation. These traits might not show up in the animal's parents, but they would have been seen in the animal's grandparents or the generations before that. These traits are called recessive traits.

One example of a recessive trait is black cat fur. Black fur often "skips" a generation in cats. That means a kitten can be born with black fur, even if its parents did not have black fur! The black fur trait was passed down from a past generation.

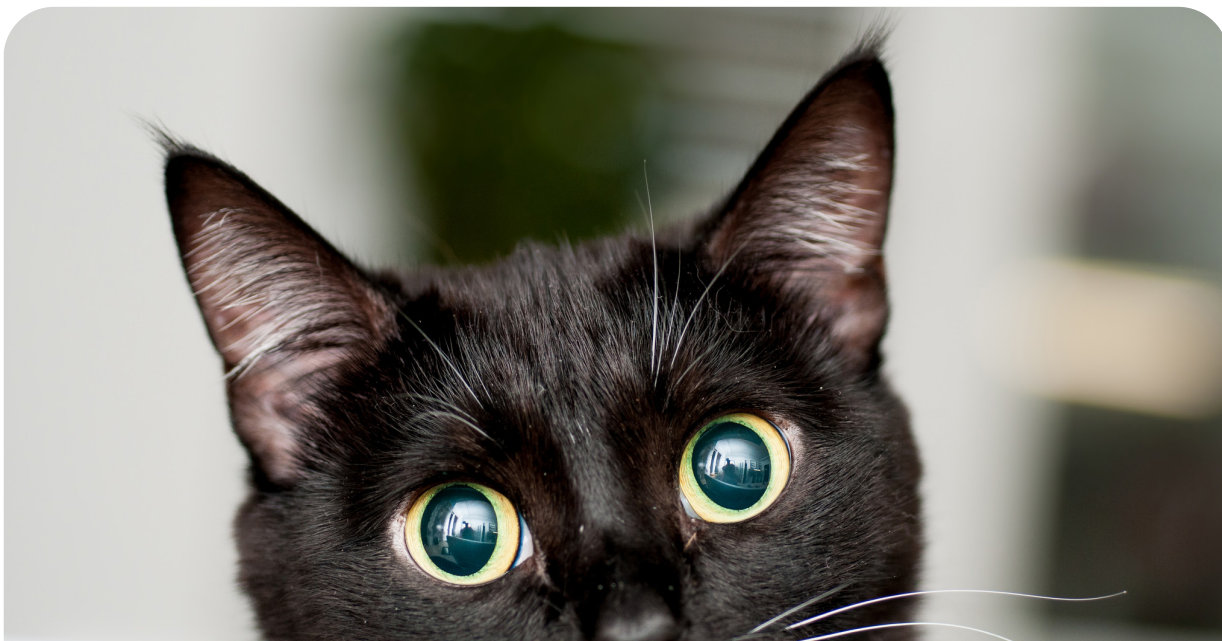


Photo: iStock / oksy001

The story of an odd animal breed!



Newfoundlands are a dog breed with a purpose! These days, most Newfoundlands are raised to be lovable family pets, but they were originally bred to help with hunting.

Newfoundlands have several traits that make them good hunting companions, especially for hunting birds that live in water, called waterfowl. People who hunt waterfowl often rely on dogs to fetch birds that have been shot in swamps and lakes. That means their hunting dogs need to be good swimmers!

Newfoundlands are up for the task!

The feet: Newfoundlands are good swimmers because they have webbed feet, like ducks! This helps them move more quickly in the water!

The toes: Newfoundlands also have long toes! Longer toes work sort of like paddles to help them move through the water.

The fur: Newfoundlands have waterproof fur! Water slides right off of them, sort of like they are wearing a raincoat. This helps keep them dry and warm in the water.

Newfoundlands aren't the only dogs bred for hunting waterfowl. Other popular breeds are Portuguese Water Dogs, Chesapeake Bay Retrievers and Labrador Retrievers.

FUN FACT: Digging Dachshunds!

Dachshunds were also bred to have an important job! This dog breed was developed 300 years ago in Germany. They were bred for hunting badgers. Their small but long bodies made them great for fitting into badger burrows! In fact, "Dachshund" means "badger dog" in German.

ACTIVITY:

Scrambled eggs!

See how fast you can un-scramble these animal science terms!
The answers are at the bottom of the page—but don't peek!

VREOHERBI _____

Hint: An animal that eats only plants

VCCAIEN _____

Hint: A shot an animal gets to prevent disease. Also called an immunization

FEBE _____

Hint: Meat than comes from cattle

EFED _____

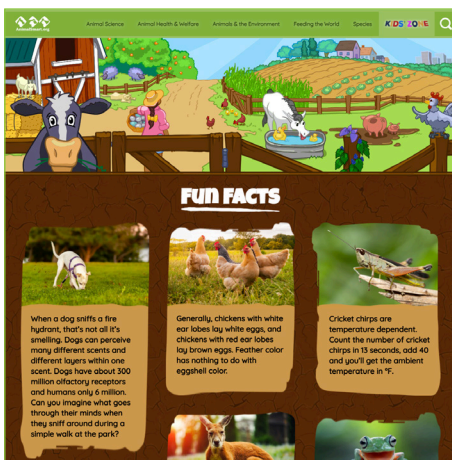
Hint: What animals eat

ARIYD _____

Hint: Products made from milk, such as yogurt and butter



Photo: iStock / sunyasilaksom



Looking for more fun animal facts?

Check out the redesigned **AnimalSmart.org!** Visit the new site for lots of great animal science learning!

American Society of Animal Science
PO Box 7410, 201 W. Springfield,
Champaign, IL 61826-7410



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CONTRIBUTORS: ASAS staff.

DESIGN: Hayley Doren

CONTACT: jranimalscientist@asas.org

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