

Reading: Domestication

Domestication is the process of adapting wild plants and animals for human use.

- Domestic species are raised for food, work, clothing, medicine, and many other uses.
- Domesticated plants and animals must be raised and cared for by humans.
- Domesticated species are not wild.

Plant Domestication

People first domesticated plants about 10,000 years ago, between the Tigris and Euphrates rivers in Mesopotamia (which includes the modern countries of Iran, Iraq, Turkey, and Syria). People collected and planted the seeds of wild plants. They made sure the plants had as much water as they needed to grow, and planted them in areas with the right amount of sun. Weeks or months later, when the plants blossomed, people harvested the food crops.

The first domesticated plants in Mesopotamia were wheat (*Triticum aestivum*), barley (*Hordeum vulgare*), lentils (*Lens culinaris* or *Lens esculenta*), and types of peas. People in other parts of the world, including eastern Asia, parts of Africa, and parts of North and South America, also domesticated plants. Other plants that were cultivated by early civilizations included rice (*Oryza sativa* in Asia) and potatoes (*Solanum tuberosum* in South America).

Plants have not only been domesticated for food. Cotton plants were domesticated for fiber, which is used in cloth. Some flowers, such as tulips, were domesticated for ornamental, or decorative, reasons.

Animal Domestication

About the same time they domesticated plants, people in Mesopotamia began to tame animals for meat, milk, and hides. Hides, or the skins of animals, were used for clothing, storage, and to build tent shelters.

Goats were probably the first animals to be domesticated, followed closely by sheep (*Ovis aries*). In Southeast Asia, chickens (*Gallus domesticus*) also were domesticated about 10,000 years ago. Later, people began domesticating larger animals, such as oxen (*Bos taurus*) or horses (*Equus ferus caballus*), for plowing and transportation. These are known as beasts of burden.



Domesticating animals can be difficult work. The easiest animals to domesticate are herbivores that graze on vegetation, because they are easiest to feed: They do not need humans to kill other animals to feed them, or to grow special crops. Cows, for instance, are easily domesticated. Herbivores that eat grains are more difficult to domesticate than herbivores that graze because grains are valuable and also need to be domesticated. Chickens are herbivores that eat seeds and grain.

Ox Cart in India

Oxen (*Bos taurus*), like this one, were one of the first animals to be domesticated. Oxen are very strong, healthy animals that are used for agriculture, industry, and, occasionally, transportation. Here, an ox cart pulls a man in Secunderabad, India.

PHOTOGRAPH BY PADMANABHAN RAMCHANDER, MY SHOT

Some animals domesticated for one purpose no longer serve that purpose. Some dogs (*Canis lupus familiaris*) were domesticated to help people in hunting, for instance. There are hundreds of domestic dog species today. Many of them are still excellent hunters, but most are pets.

Throughout history, people have bred domesticated animals to increase certain traits. Domestic animals are chosen for their ability to breed in captivity and for their calm temperament. Their ability to resist disease and survive in difficult climates is also valuable.

Over time, these traits make domestic animals different from their wild ancestors. Dogs were probably domesticated from gray wolves (*Canis lupus*).

Canine Carnival

A dog (*Canis lupus familiaris*) wears a costume during Carnival celebrations in Venice, Italy. Dogs were originally domesticated to assist people in hunting. There are hundreds of domestic dog species today, but most are pets.

PHOTOGRAPH BY JODI COBB



Domesticated animals can look very different from their wild ancestors. For example, early wild chickens weighed about 0.9 kilograms (two pounds). But over thousands of years of domestication, they have been bred to be larger. Larger chickens yield more meat. Today, domestic chickens weigh as much as 7.7 kilograms (17 pounds). Wild chickens only hatched a small number of eggs once a year, while domestic chickens commonly lay 200 or more eggs each year.

Effects on Humans

Domestication marked a major turning point for humans: the beginning of an agricultural way of life and more sedentary communities. Humans no longer had to wander to hunt animals and gather plants for food.

It's important to understand, however, that while hunter gatherers did not grow crops they tended plants in allotted areas. Once grown, the plant could then be collected as food.

Agriculture—the cultivating of domestic plants—allowed fewer people to provide food for the community. The stability that came with regular, predictable food production led to increased population density. The world's first villages and cities were built near floodplains where fields of domesticated plants could be grown more easily.

Plant domestication also led to advances in tool production. The earliest farming tools were hand tools made from stone. People later developed metal farming tools, and eventually used plows pulled by domesticated animals to work fields.

FAST FACTS

Dogs and Wolves

Though today's dogs were likely domesticated from gray wolves, they are now a distinct species. Dogs' scientific name is *Canis lupus familiaris*, while the scientific name for gray wolves is *Canis lupus*.

Wild Horses

The process of domestication continues. Cowboys and other horse experts train horses (*Equus ferus caballus*). Sometimes, this is called "breaking" a horse. Training a horse to allow a saddle and rider requires an enormous amount of physical work, training, and patience. Horses that are born on ranches or in stables still need to be trained, although training a young horse is easier than domesticating a horse caught in the wild.