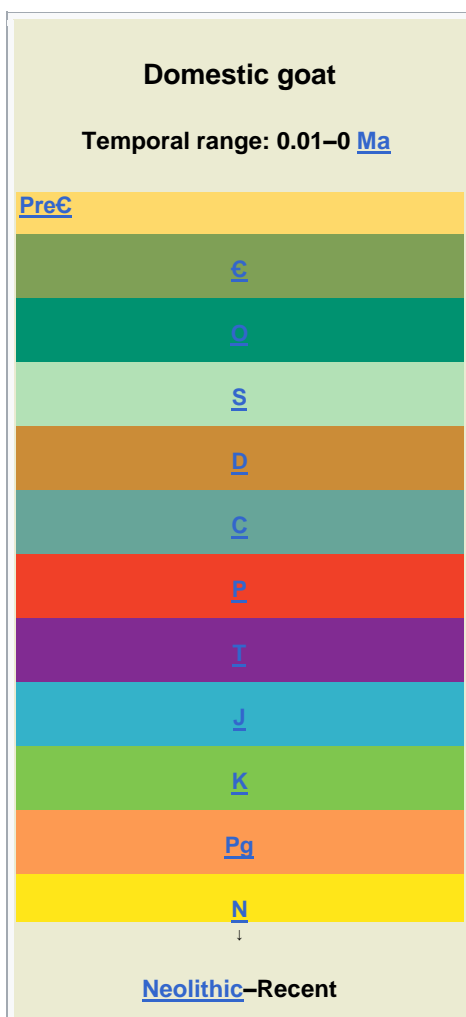


This article is about the domesticated species of goat. For other species, see [Capra \(genus\)](#). For other uses, see [Goat \(disambiguation\)](#).

"Billy goat" redirects here. For other uses, see [Billy goat \(disambiguation\)](#).



A [pygmy goat](#) on a [tree stump](#)

[Conservation status](#)

Domesticated

[Scientific classification](#)

Kingdom: [Animalia](#)

Phylum: [Chordata](#)

Class: [Mammalia](#)

Order: [Artiodactyla](#)

Family: [Bovidae](#)

Subfamily: [Caprinae](#)

Tribe: [Caprini](#)

Genus: [Capra](#)

Species: ***C. hircus***

[Binomial name](#)

Capra hircus

[Linnaeus, 1758](#)

[Synonyms](#)

Capra aegagrus

hircus Linnaeus, 1758

Capra depressa Linnaeus, 1758

Capra mambrica Linnaeus, 1758

Capra reversa Linnaeus, 1758

The **goat** or **domestic goat** (*Capra hircus*) is a [domesticated](#) species of [goat-antelope](#) typically kept as [livestock](#). It was [domesticated](#) from the [wild goat](#) (*C. aegagrus*) of [Southwest Asia](#) and [Eastern Europe](#). The goat is a member of the animal family [Bovidae](#) and the tribe [Caprini](#), meaning it is closely related to the [sheep](#). There are over 300 distinct [breeds](#) of goat.^[1] It is one of the oldest domesticated species of animal, according to archaeological evidence that its earliest domestication occurred in Iran at 10,000 calibrated calendar years ago.^[2]



Goat-herding is an ancient tradition that is still important in places such as Egypt.

Goats have been used for [milk](#), [meat](#), [fur](#), and [skins](#) across much of the world.^[3] Milk from goats is often turned into [goat cheese](#).

Female goats are referred to as *does* or *nannies*, [intact](#) males are called *bucks* or *billies*, and juvenile goats of both sexes are called *kids*. [Castrated](#) males are called *wethers*. While the words *hircine* and *caprine* both refer to anything having a goat-like quality, *hircine* is used most often to emphasize the distinct smell of domestic goats.

In 2011, there were more than 924 million goats living in the world, according to the [UN Food and Agriculture Organization](#).^[4]

Etymology



Goat-herding in Spain.

The [Modern English](#) word *goat* comes from [Old English](#) *gāt* "she-goat, goat in general", which in turn derives from [Proto-Germanic](#) **gaitaz* (cf. [Dutch/Frisian/Icelandic/Norwegian](#) *geit*, [German](#) *Geiß*,

and [Gothic](#) *gaits*), ultimately from [Proto-Indo-European](#) **ǵʰaidos* meaning "young goat" (cf. [Latin](#) *haedus* "kid").^[5] To refer to the male goat, Old English used *bucca* (cf. [Dutch/Frisian](#) *bok* and giving modern *buck*) until ousted by *hegote*, *hegoote* in the late 12th century. *Nanny goat* (females) originated in the 18th century, and *billy goat* (for males) originated in the 19th century.^[citation needed]

History

Main article: [Evolution of domestic goats](#)



Horn cores from the Neolithic village of [Atlit Yam](#)



Skeleton (*Capra hircus*)

Goats are among the earliest animals domesticated by humans.^[6] The most recent genetic analysis^[7] confirms the archaeological evidence that the wild [bezoar ibex](#) of the [Zagros Mountains](#) is the likely original ancestor of probably all domestic goats today.^[6]

[Neolithic](#) farmers began to herd wild goats primarily for easy access to [milk](#) and meat, as well as to their dung, which was used as fuel; and their bones, hair, and sinew were used for clothing, building, and tools.^[11] The earliest remnants of domesticated goats dating 10,000 years [Before Present](#) are found in [Ganj Dareh](#) in [Iran](#).^[8] Goat remains have been found at archaeological sites in [Jericho](#), [Choga Mami](#),^[9] [Djeitun](#), and [Çayönü](#), dating the domestication of goats in [Western Asia](#) at between 8,000 and 9,000 years ago.^[6]

Studies of DNA evidence suggests 10,000 years ago as the domestication date.^[7]

Historically, goat hide has been used for water and [wine](#) bottles in both traveling and transporting wine for sale. It has also been used to produce [parchment](#).^[citation needed]

Anatomy and health

Each recognized breed of goat has specific weight ranges, which vary from over 140 kg (300 lb) for bucks of larger breeds such as the Boer, to 20 to 27 kg (45 to 60 lb) for smaller goat does.^[10] Within

each breed, different strains or bloodlines may have different recognized sizes. At the bottom of the size range are miniature breeds such as the African Pygmy, which stand 41 to 58 cm (16 to 23 in) at the shoulder as adults.^[11]

Horns



A white Irish goat with horns

Most goats naturally have two [horns](#), of various shapes and sizes depending on the breed.^[12] There have been incidents of [polycerate](#) goats (having as many as eight horns), although this is a genetic rarity thought to be inherited. Unlike cattle, goats have not been successfully bred to be reliably [polled](#), as the genes determining sex and those determining horns are closely linked. Breeding together two genetically polled goats results in a high number of [intersex](#) individuals among the offspring, which are typically sterile.^[12] Their horns are made of living bone surrounded by [keratin](#) and other [proteins](#), and are used for defense, dominance, and territoriality.^[13]

Digestion and lactation

Goats are [ruminants](#). They have a four-chambered stomach consisting of the [rumen](#), the [reticulum](#), the [omasum](#), and the [abomasum](#). As with other mammal ruminants, they are even-toed ungulates. The females have an [udder](#) consisting of two teats, in contrast to cattle, which have four teats.^[14] An exception to this is the [Boer goat](#), which sometimes may have up to eight teats.^{[15][16]}

Eyes

Goats have horizontal, slit-shaped [pupils](#). Because goats' [irises](#) are usually pale, their contrasting pupils are much more noticeable than in animals such as cattle, deer, most horses, and many sheep, whose similarly horizontal pupils blend into a dark iris and [sclera](#).^[citation needed]

Goats have no tear ducts.^[17]



Eye with horizontal pupil

Beards

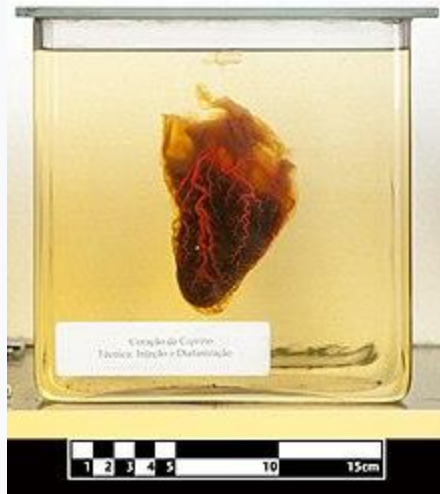
Both male and female goats may have beards, and many types of goat (most commonly dairy goats, dairy-cross [Boers](#), and [pygmy goats](#)) may have [wattles](#), one dangling from each side of the neck.^[18]

Tan



Brown/tan goat with some white spotting

Goats expressing the tan pattern have coats pigmented completely with [pheomelanin](#) (tan/brown pigment). The [allele](#) which codes for this pattern is located at the *agouti locus* of the goat [genome](#). It is completely [dominant](#) to all other alleles at this [locus](#). There are multiple [modifier genes](#) which control how much tan pigment is actually expressed, so a tan-patterned goat can have a coat ranging from pure white to deep red.^[citation needed]



Goat heart. Specimen clarified for visualization of anatomical structures

Reproduction

"Goat sex" redirects here. For the shock site, see goatse.cx.



This section **needs additional citations for [verification](#)**. Please help [improve this article](#) by [adding citations to reliable sources](#) in this section. Unsourced material may be challenged and removed. (June 2021) ([Learn how and when to remove this template message](#))



Goat kid



A two-month-old goat kid in a field of [capeweed](#)

Goats reach puberty between three and 15 months of age, depending on breed and nutritional status. Many breeders prefer to postpone breeding until the doe has reached 70% of the adult weight. However, this separation is rarely possible in extensively managed, open-range herds.^[19]

In temperate climates and among the Swiss breeds, the [breeding season](#) commences as the day length shortens, and ends in early spring or before. In equatorial regions, goats are able to [breed](#) at any time of the year. Successful breeding in these regions depends more on available forage than on day length. Does of any breed or region come into [estrus](#) (heat) every 21 days for two to 48 hours. A doe in heat typically flags (vigorously wags) her tail often, stays near the buck if one is present, becomes more vocal, and may also show a decrease in appetite and milk production for the duration of the heat.



A female goat and two kids

Bucks (intact males) of Swiss and northern breeds come into [rut](#) in the fall as with the does' heat cycles. Bucks of equatorial breeds may show seasonal reduced fertility, but as with the does, are capable of breeding at all times. Rut is characterized by a decrease in appetite and obsessive interest in the does.^[13] A buck in rut will display [flehmen](#) lip curling and will [urinate on his forelegs and face](#).^[20] Sebaceous scent glands at the base of the horns add to the male goat's odor, which is important to make him attractive to the female. Some does will not mate with a buck which has been descended.^[13]

In addition to natural, traditional mating, [artificial insemination](#) has gained popularity among goat [breeders](#), as it allows easy access to a wide variety of [bloodlines](#).

[Gestation](#) length is approximately 150 days. [Twins](#) are the usual result, with single and [triplet](#) births also common. Less frequent are litters of [quadruplet](#), [quintuplet](#), and even [sextuplet](#) kids. Birthing, known as kidding, generally occurs uneventfully. Just before kidding, the doe will have a sunken area around the tail and hip, as well as heavy breathing. She may have a worried look, become restless and display great affection for her keeper. The mother often [eats the placenta](#), which gives her much-needed nutrients, helps stanch her bleeding, and parallels the behavior of wild [herbivores](#), such as deer, to reduce the lure of the birth scent for predators.^{[21][22]}

Freshening usually (coming into milk production) occurs at kidding, although milk production is also relatively common in unbred doelings of dairy breeds.^[23] Milk production varies with the breed, age, quality, and diet of the doe; dairy goats generally produce between 680 and 1,810 kg (1,500 and 4,000 lb) of milk per 305-day [lactation](#). On average, a good quality dairy doe will give at least 3 kg (6 lb) of milk per day while she is in milk. A first-time milker may produce less, or as much as 7 kg (16 lb), or more of milk in exceptional cases. After the lactation, the doe will "dry off", typically after she has been bred. Occasionally, goats that have not been bred and are continuously milked will continue lactation beyond the typical 305 days.^[24] Meat, fiber, and [pet](#) breeds are not usually milked and simply produce enough for the kids until [weaning](#).

[Male lactation](#) is also known to occur in goats.^[25]

Diet

Goats are reputed to be willing to eat almost anything, including tin cans and [cardboard](#) boxes. While goats will not actually eat inedible material, they are [browsing](#) animals, not [grazers](#) like cattle and sheep, and (coupled with their highly curious nature) will chew on and taste just about anything remotely resembling plant matter to decide whether it is good to eat, including cardboard, clothing and paper (such as labels from tin cans).^[26]

Aside from sampling many things, goats are quite particular in what they actually consume, preferring to browse on the tips of woody shrubs and trees, as well as the occasional broad-leaved plant. However, it can fairly be said that their plant diet is extremely varied, and includes some species which are otherwise toxic.^[27] They will seldom consume soiled food or contaminated water unless facing [starvation](#). This is one reason goat-rearing is most often [free-ranging](#), since stall-fed goat-rearing involves extensive upkeep and is seldom commercially viable.^[citation needed]



A domestic goat feeding in a field of capeweed, a weed which is toxic to most stock animals

Goats prefer to browse on [vines](#), such as [kudzu](#), on [shrubbery](#) and on [weeds](#), more like deer than sheep, preferring them to grasses. [Nightshade](#) is poisonous; wilted fruit tree leaves can also kill goats. [Silage](#) (fermented corn stalks) and haylage (fermented grass hay) can be used if consumed immediately after opening – goats are particularly sensitive to [Listeria](#) bacteria that can grow in fermented feeds. [Alfalfa](#), a high-protein plant, is widely fed as [hay](#); [fescue](#) is the least palatable and least nutritious hay. [Mold](#) in a goat's feed can make it sick and possibly kill it. In various places in China, goats are used in the production of tea. Goats are released onto the tea terraces where they avoid consuming the green tea leaves (which contain bitter tasting substances), but instead eat the weeds. The goats' droppings fertilise the tea plants.^[28]

The digestive physiology of a very young kid (like the young of other ruminants) is essentially the same as that of a [monogastric](#) animal. Milk digestion begins in the [abomasum](#), the milk having bypassed the rumen via closure of the reticuloesophageal groove during suckling. At birth, the rumen is undeveloped, but as the kid begins to consume solid feed, the rumen soon increases in size and in its capacity to absorb nutrients.^[29]

The adult size of a particular goat is a product of its breed (genetic potential) and its diet while growing (nutritional potential). As with all [livestock](#), increased protein diets (10 to 14%) and sufficient calories during the prepuberty period yield higher growth rates and larger eventual size than lower protein rates and limited calories.^[30] Large-framed goats, with a greater skeletal size, reach mature weight at a later age (36 to 42 months) than small-framed goats (18 to 24 months) if both are fed to their full potential. Large-framed goats need more calories than small-framed goats for maintenance of daily functions.^[31]

Behavior

An example of goats browsing together in [Japan](#).



Goats blocking a road in [Ladakh](#)



Goats establish a [dominance hierarchy](#) in flocks, sometimes through head butting.

Goats are naturally curious. They are also agile and well known for their ability to climb and balance in precarious places. This makes them the only [ruminant](#) to regularly climb trees. Due to their agility and inquisitiveness, they are notorious for escaping their pens by testing fences and enclosures, either intentionally or simply because they are used to climbing. If any of the fencing can be overcome, goats will almost inevitably escape. Goats have been found to be as intelligent as dogs by some studies.^[32]

When handled as a group, goats tend to display less herding behavior than sheep. When grazing undisturbed, they tend to spread across the field or range, rather than feed side by side as do sheep. When nursing young, goats will leave their kids separated ("lying out") rather than clumped, as do sheep. They will generally turn and face an intruder and bucks are more likely to charge or butt at humans than are [rams](#).^[33]

A study by [Queen Mary University](#) reports that goats try to communicate with people in the same manner as domesticated animals such as dogs and horses. Goats were first domesticated as livestock more than 10,000 years ago. Research conducted to test communication skills found that the goats will look to a human for assistance when faced with a challenge that had previously been mastered, but was then modified. Specifically, when presented with a box, the goat was able to remove the lid and retrieve a treat inside, but when the box was turned so the lid could not be removed, the goat would turn and gaze at the person and move toward them, before looking back toward the box. This is the same type of complex communication observed by animals bred as domestic pets, such as dogs. Researchers believe that better understanding of human-goat interaction could offer overall improvement in the animals' welfare.^{[34][35]} The field of anthrozoology has established that domesticated animals have the capacity for complex communication with humans when in 2015 a Japanese scientist determined that levels of oxytocin did increase in human subjects when dogs were exposed to a dose of the "love hormone", proving that a human-animal bond does exist. This is the same affinity that was proven with the London study above; goats are intelligent, capable of complex communication, and able to form bonds.^[36]

Diseases

Main article: [List of infectious sheep and goat diseases](#)

While goats are generally considered hardy animals and in many situations receive little medical care, they are subject to a number of diseases. Among the conditions affecting goats are respiratory diseases including [pneumonia](#), foot rot, internal parasites, pregnancy toxicosis, and feed toxicity. Feed toxicity can vary based on breed and location. Certain foreign fruits and vegetables can be toxic to different breeds of goats.^[*citation needed*]

Goats can become infected with various viral and bacterial diseases, such as [foot-and-mouth disease](#), [caprine arthritis encephalitis](#), [caseous lymphadenitis](#), pinkeye, mastitis, and [pseudorabies](#). They can transmit a number of zoonotic diseases to people, such as [tuberculosis](#), [brucellosis](#), [Q fever](#), and [rabies](#).^[*37*]

Life expectancy

Life expectancy for goats is between 15 and 18 years.^[*38*] An instance of a goat reaching the age of 24 has been reported.^[*39*]

Several factors can reduce this average expectancy; problems during kidding can lower a doe's expected life span to 10 or 11, and stresses of going into rut can lower a buck's expected life span to eight to 10 years.^[*39*]

Agriculture

Main article: [Goat farming](#)



This section **needs additional citations for [verification](#)**. Please help [improve this article](#) by [adding citations to reliable sources](#) in this section. Unsourced material may be challenged and removed. (June 2021) ([Learn how and when to remove this template message](#))



Goat [husbandry](#) is common through the [Norte Chico](#) region in [Chile](#). Intensive goat husbandry in drylands may produce severe [erosion](#) and [desertification](#). Image from upper [Limarí River](#)

A goat is useful to humans when it is living and when it is dead, first as a renewable provider of [milk](#), [manure](#), and [fiber](#), and then as meat and hide.^[*40*] Some [charities](#) provide goats to [impoverished](#) people in poor countries, because goats are easier and cheaper to manage than [cattle](#), and have multiple uses. In addition, goats are used for driving and [packing](#) purposes.

The intestine of goats is used to make "[catgut](#)", which is still in use as a material for internal human [surgical sutures](#) and strings for [musical instruments](#). The horn of the goat, which signifies plenty and wellbeing (the [cornucopia](#)), is also used to make [spoons](#).^[*41*]

Worldwide population statistics

According to the [Food and Agriculture Organization](#) (FAO), the top producers of goat milk in 2008 were India (4 million metric tons), Bangladesh (2.16 million metric tons), and the Sudan (1.47 million metric tons).^[42] India slaughters 41% of 124.4 million goats each year. The 0.6 million metric tonnes of goat meat make up 8% of India's annual meat production.^[43] Approximately 440 million goats are slaughtered each year for meat worldwide.^[44]

Husbandry



Species-appropriate goat husbandry with stable and [hay rack](#)

Husbandry, or animal care and use, varies by region and culture. The particular housing used for goats depends not only on the intended use of the goat, but also on the region of the world where they are raised. Historically, domestic goats were generally kept in herds that wandered on hills or other grazing areas, often tended by [goatherds](#) who were frequently children or [adolescents](#), similar to the more widely known [shepherd](#). These methods of [herding](#) are still used today.

In some parts of the world, especially Europe and North America, distinct breeds of goats are kept for dairy (milk) and for meat production. Excess male kids of dairy breeds are typically slaughtered for meat. Both does and bucks of meat breeds may be slaughtered for meat, as well as older animals of any breed. The meat of older bucks (more than one year old) is generally considered not desirable for meat for human consumption. Castration at a young age prevents the development of typical buck odor.



Goats are important livestock for [smallholder](#) farmers in many countries, such as this woman from [Burkina Faso](#).

Dairy goats are generally pastured in summer and may be stabled during the winter. As dairy does are milked daily, they are generally kept close to the milking shed. Their grazing is typically supplemented with hay and concentrates. Stabled goats may be kept in stalls similar to horses, or in larger group pens. In the US system, does are generally rebred annually. In some European commercial dairy systems, the does are bred only twice, and are milked continuously for several years after the second kidding.

Meat goats are more frequently pastured year-round, and may be kept many miles from barns. Angora and other fiber breeds are also kept on pasture or range. Range-kept and pastured goats may be supplemented with hay or concentrates, most frequently during the winter or dry seasons.

In the [Indian subcontinent](#) and much of Asia, goats are kept largely for milk production, both in commercial and household settings. The goats in this area may be kept closely housed or may be allowed to range for fodder. The Salem Black goat is herded to pasture in fields and along roads during the day, but is kept penned at night for safe-keeping.^[45]

In Africa and the Mideast, goats are typically run in flocks with sheep. This maximizes the production per acre, as goats and sheep prefer different food plants. Multiple types of goat-raising are found in Ethiopia, where four main types have been identified: pastured in annual crop systems, in perennial crop systems, with cattle, and in arid areas, under pastoral (nomadic) herding systems. In all four systems, however, goats were typically kept in extensive systems, with few purchased inputs.^[46] Household goats are traditionally kept in Nigeria. While many goats are allowed to wander the homestead or village, others are kept penned and fed in what is called a 'cut-and-carry' system. This type of husbandry is also used in parts of Latin America. Cut-and-carry, which refers to the practice of cutting down grasses, corn or cane for feed rather than allowing the animal access to the field, is particularly suited for types of feed, such as corn or cane, that are easily destroyed by trampling.^[47]

Pet goats may be found in many parts of the world when a family keeps one or more animals for emotional reasons rather than as production animals. It is becoming more common for goats to be kept exclusively as pets in North America and Europe.

Meat

Main article: [Goat meat](#)

See also: [List of goat dishes](#)



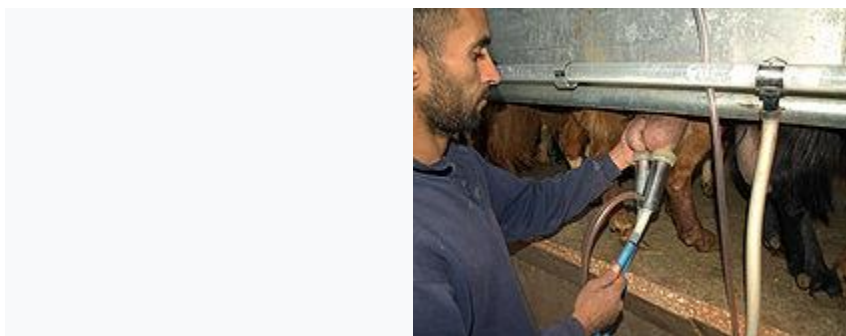
The [Boer goat](#) – in this case a buck – is a widely kept meat breed.

The taste of goat kid meat is similar to that of [spring lamb](#) meat;^[48] in fact, in the English-speaking islands of the [Caribbean](#), and in some parts of Asia, particularly [Bangladesh](#), [Pakistan](#), and [India](#), the word "[mutton](#)" is used to describe both goat and sheep meat. However, some compare the taste of goat meat to [veal](#) or [venison](#), depending on the age and condition of the goat. Its flavor is said to be primarily linked to the presence of [4-methyloctanoic](#) and [4-methylnonanoic acid](#).^[49] It can be prepared in a variety of ways, including [stewing](#), [baking](#), [grilling](#), [barbecuing](#), [canning](#), and [frying](#); it can be [minced](#), [curried](#), or made into [sausage](#). Due to its low fat content, the meat can toughen at high temperatures if cooked without additional moisture. One of the most popular goats grown for meat is the [South African Boer](#), introduced into the [United States](#) in the early 1990s. The [New Zealand Kiko](#) is also considered a meat breed, as is the [myotonic or "fainting goat"](#), a breed originating in [Tennessee](#).

Milk, butter, and cheese

Main article: [Goat milk](#)

See also: [List of goat milk cheeses](#)



A goat being machine milked on an [organic farm](#)

Goats produce about 2% of the world's total annual milk supply.^[50] Some goats are bred specifically for [milk](#). If the strong-smelling buck is not separated from the does, his scent will affect the milk.

Goat milk naturally has small, well-emulsified fat globules, which means the cream remains suspended in the milk, instead of rising to the top, as in raw cow milk; therefore, it does not need to be [homogenized](#). Indeed, if the milk is to be used to make cheese, homogenization is not recommended, as this changes the structure of the milk, affecting the culture's ability to coagulate the milk and the final quality and yield of cheese.^[51]

Dairy goats in their prime (generally around the third or fourth lactation cycle) average—2.7 to 3.6 kg (6 to 8 lb)—of milk production daily—roughly 2.8 to 3.8 L (3 to 4 U.S. qt)—during a ten-month [lactation](#), producing more just after freshening and gradually dropping in production toward the end of their lactation. The milk generally averages 3.5% [butterfat](#).^[52]

Goat milk is commonly processed into [cheese](#), [butter](#), [ice cream](#), [yogurt](#), [cajeta](#) and other products. [Goat cheese](#) is known as *fromage de chèvre* ("goat cheese") in France. Some varieties include [Rocamadour](#) and Montrachet.^[53] Goat [butter](#) is white because goats produce milk with the yellow [beta-carotene](#) converted to a colorless form of [vitamin A](#). Goat milk has less cholesterol than cow's milk.^[54]

Nutrition

The [American Academy of Pediatrics](#) discourages feeding infants milk derived from goats. An April 2010 case report^[55] summarizes their recommendation and presents "a comprehensive review of the consequences associated with this dangerous practice", also stating, "Many infants are exclusively fed unmodified goat's milk as a result of cultural beliefs as well as exposure to false online information. Anecdotal reports have described a host of morbidities associated with that practice, including severe electrolyte abnormalities, metabolic acidosis, megaloblastic anemia, allergic reactions including life-threatening anaphylactic shock, hemolytic uremic syndrome, and infections." Untreated caprine [brucellosis](#) results in a 2% case fatality rate. According to the [USDA](#), doe milk is not recommended for human infants because it contains "inadequate quantities of [iron](#), [folate](#), [vitamins C](#) and [D](#), [thiamine](#), [niacin](#), [vitamin B₆](#), and [pantothenic acid](#) to meet an infant's nutritional needs" and may cause harm to an infant's [kidneys](#) and could cause metabolic damage.^[56]

The department of health in the United Kingdom has repeatedly released statements stating on various occasions that^[57] "Goats' milk is not suitable for babies, and infant formulas and follow-on formulas based on goats' milk protein have not been approved for use in Europe", and "infant milks based on goats' milk protein are not suitable as a source of nutrition for infants."^[58] Moreover, according to the Canadian federal health department *Health Canada*, most of the dangers of, and counter-indications for, feeding unmodified goat's milk to infants parallel those associated with unmodified cow's milk—especially insofar as allergic reactions go.^[59]

However, some farming groups promote the practice. For example, Small Farm Today, in 2005, claimed beneficial use in invalid and convalescent diets, proposing that [glycerol ethers](#), possibly important in nutrition for nursing infants, are much higher in does' milk than in cows' milk.^[60] A 1970 book on animal breeding claimed that does' milk differs from cows' or humans' milk by having higher digestibility, distinct [alkalinity](#), higher [buffering capacity](#), and certain therapeutic values in human medicine and nutrition.^[61] George Mateljan suggested doe milk can replace [ewe milk](#) or cow milk in diets of those who are allergic to certain mammals' milk.^[62] However, like cow milk, doe milk has [lactose](#) (sugar), and may cause [gastrointestinal problems](#) for individuals with [lactose intolerance](#).^[62] In fact, the level of lactose is similar to that of cow milk.^[58]

Some researchers and companies producing goat's milk products have made claims that goat's milk is better for human health than most Western cow's milk due to it mostly lacking a form of β -casein proteins called A1, and instead mostly containing [the A2 form](#), which does not metabolize to [\$\beta\$ -casomorphin 7](#) in the body.^{[63][64][65][66]}

Basic composition of various milks (mean values per 100 g)^[67]

Constituent	Doe (goat)	Cow	Human
Fat (g)	3.8	3.6	4.0
Protein (g)	3.5	3.3	1.2
Lactose (g)	4.1	4.6	6.9
Ash (g)	0.8	0.7	0.2
Total solids (g)	12.2	12.3	12.3
Calories	70	69	68

Milk composition analysis, per 100 grams^[68]

Constituents	Unit	Cow	Doe (goat)	Ewe (sheep)	Water buffalo
Water	g	87.8	88.9	83.0	81.1

Protein	g	3.2	3.1	5.4	4.5
Fat	g	3.9	3.5	6.0	8.0
Carbohydrates	g	4.8	4.4	5.1	4.9
Energy	kcal	66	60	95	110
Energy	kJ	275	253	396	463
Sugars (lactose)	g	4.8	4.4	5.1	4.9
Cholesterol	mg	14	10	11	8
Calcium	IU	120	100	170	195
Saturated fatty acids	g	2.4	2.3	3.8	4.2
Monounsaturated fatty acids	g	1.1	0.8	1.5	1.7
Polyunsaturated fatty acids	g	0.1	0.1	0.3	0.2

These compositions vary by breed (especially in the [Nigerian Dwarf](#) breed), animal, and point in the lactation period.

Fiber



An [Angora goat](#)

The Angora breed of goats produces long, curling, lustrous locks of [mohair](#). The entire body of the goat is covered with mohair and there are no guard hairs. The locks constantly grow to four inches or more in length. Angora crossbreeds, such as the [pygora](#) and the [nigora](#), have been created to produce mohair and/or cashgora on a smaller, easier-to-manage animal. The wool is [shorn](#) twice a year, with an average yield of about 4.5 kg (10 lb).

Most goats have softer insulating hairs nearer the skin, and longer [guard hairs](#) on the surface. The desirable fiber for the [textile industry](#) is the former, and it goes by several names (down, cashmere and pashmina). The coarse guard hairs are of little value as they are too coarse, difficult to spin and difficult to dye. The [cashmere goat](#) produces a commercial quantity of [cashmere wool](#), which is one of the most expensive natural fibers commercially produced; cashmere is very fine and soft. The cashmere goat fiber is harvested once a year, yielding around 260 g (9 oz) of down.

In [South Asia](#), cashmere is called "[pashmina](#)" (from [Persian](#) *pashmina*, "fine wool"). In the 18th and early 19th centuries, Kashmir (then called Cashmere by the British), had a thriving industry producing shawls from goat-hair imported from Tibet and Tartary through Ladakh. The shawls were introduced into Western Europe when [Napoleon Bonaparte](#), the General in Chief of the [French campaign in Egypt](#) (1798–1801), sent one to Paris. Since these shawls were produced in the upper [Kashmir](#) and [Ladakh](#) region, the wool came to be known as "cashmere".

Land clearing