

## Dairy Goat Versus Dairy Cow

### Dairy Goat Udder Anatomy

- 70% of milk is stored in the udder/gland cistern.
- 30% of milk is stored in the alveoli.
- Goats have two teats.

### Dairy Cow Udder Anatomy

- 60% of milk is stored in the alveoli.
- 20% of milk is stored in the ducts.
- 20% of milk is stored in the gland cistern.
- Dairy cows have four teats.

### Dairy Goat Versus Dairy Cow Milking

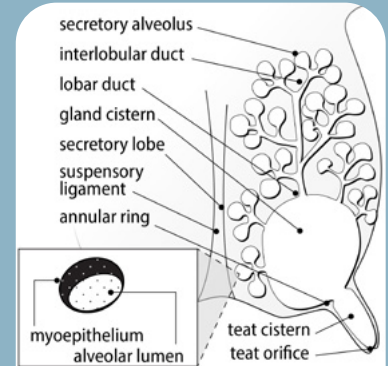
- Cows require stimulation to move the milk from the alveoli to the cistern. This is accomplished with oxytocin or the presence of the calf, depending on the breed.
- With goats, milking is easier because most of the milk is stored in the gland's cistern, which makes it easier to release.
- Goats are smaller and easier to handle than cows; however, they are more social and playful, which can make milking difficult.

### Other Differences

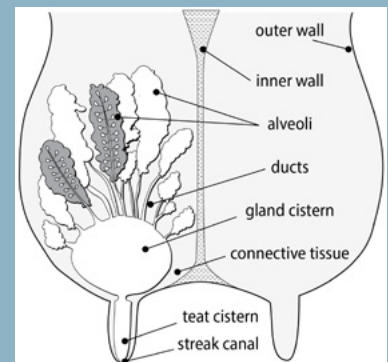
- Goat milk has more cytoplasmic fragments, similar to human milk, and more milk fat globules.
- **Bioactive components** secreted with goat milk include epidermal growth factor (EGF), polyamine, and free amino acids.
- Goat milk is considered **hypoallergenic**. It has lower levels of the protein alpha-s1 casein than cow milk, making it easier to digest.
- The iron and calcium components of goat milk are **easier to absorb** than those of cow milk.
- The **composition ranges** of cow and goat milk may vary depending on factors such as breed, diet, and lactation stage.
- Goat milk contains **prebiotic oligosaccharides**, which are carbohydrates that feed good gut bacteria.

### Differences in goat and cow milk composition.

Variable	Goat Milk	Cow Milk
Solids (%)	12.0–15.4	12.3–15.6
Fat (%)	3.2–6.0	2.7–4.8
Protein (%)	3.0–3.8	2.8–3.9
Casein (%)	2.4–2.8	2.0–3.0
Casein/Protein (%)	70–80	65–79
Lactose (%)	3.6–4.8	4.2–5.2
Ash (%)	0.7–0.9	0.6–0.8
Energy (MJ/kg)	2.93–3.49	2.72–3.39
Somatic cell count ( $\times 10^3$ cells/mL)	200–1000	< 750
pH	6.6–6.8	6.6–6.8



Goat udder anatomy



Cow udder anatomy

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By **Jill DeGayner**, Bachelor of Science Graduate; **Leyla Rios**, PhD, Assistant Professor, Animal and Dairy Sciences; and **Carlos Alvarado**, PhD, Dairy Product Specialist, Langston University.  
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