Difference Between Goats Milk and Cows Milk For Cheesemaking

What makes goats milk unique?

In the big picture goats milk and cows milk is quite similar, they are both made of the same building blocks, fat and protein the levels of fat and protein in both species of milk is quite similar.
Of course just like how jerseys are known in the cow world to have high butterfat, goats have differences in proteins and fats between breeds as well.

A big difference between goats milk and cows milk is that goats milk is deficient in beta carotene. Beta carotene is what causes cows milk to be yellow. This means that no matter the season or the diet, goats milk is pure white all year long.

Goats milk is also naturally homogenized, this has to do with the fat globules being smaller. Though this can be beneficial for cheesemaking, it means that despite having a high fat content in the milk, you will not get a cream line. If you are wanting to make butter with goats milk you will need a cream separator.

Though cows and goats milk have the same types of proteins, the casein proteins and the whey proteins, goats milk have a higher concentration of the types of proteins that cause low quantities of milk and weaker curds. This means that even though the protein amount between cows and goats milk is similar, goats milk yeild may be lower and the curds formed from goats milk will be weaker.

What can you do to make great cheese?

Here are a few of Katies tips and tricks to help you make amazing cheese!

✔️Filter and chill your milk quickly. It is very important when making cheese with goats milk to use good milk handling practices and rapid chilling (see Sarahs Hand milking a goat video on how she does this).
✔️Use fresh milk only. Same day milk is best practice but be sure you are not using milk any older than 2-3 days. Cold loving bacterias can be active in refrigerated milk and they can start to break down the fat which can cause off tastes in the milk.

Converting a pasteurized milk recipe to a raw milk recipe

Here are a few of Katies tips for converting a pasteurized milk recipe to a raw milk recipe. These are nothing more than guidelines, the biggest thing that you can do to successfully convert a recipe to work with your milk is to take lots of notes and make observations about how your milk acts so that next time you can adjust accordingly.

✔️Cut lactic bacteria dose in half when using raw milk in a pasteurized recipe
✔️Cut back culturing time about 15 min
✔️Cut back on rennet 5-10%. This may mean you are decreasing by a drop.
✔️Decrease the temperature 2-5 degrees F throughout the whole recipe especially during coagulation. So for example, if a recipe called for you to heat the milk to 90F for coagulation, heat it to 88F.

✔️Add calcium chloride into both pasteurized and raw milk goat recipes. The reason for this is that because the goats milk curd is so fragile, the calcium chloride will help create stronger bonds between the curds. This will contribute to less fat loss and higher yield.

✔️Remember that the curd is fragile. Be extra gentle in all steps especially when cutting and stirring young curds.

Late Lactation Milk

Late lactation can be characterized by after breeding and up until your goat drys up. During late lactation their are 3 big changes that happen to your milk that will affect its cheesemaking ability.

Higher Somatic Cell Count
To combat later lactations higher somatic cell count, increase your lactic bacterial culture slightly.

Higher fat and protein content but it degrades in quality.

✔️The curd will be extra fragile so handle with care. You may add a tiny bit more rennet and you should be using calcium chloride.

✔️Add 5-20% water into your cheese during later lactation. To do this add your milk into the pot, add in 5-20% water and than calculate your rennet and culture dose from the total gross pot volume.

It is important to remember that late lactation milk may not necessarily want to become hard aged cheese. You may have to switch up what kind of cheese you are making as your goat gets farther into lactation.
These traits mentioned above may also be observed in goats that are only being milked once a day or goats that are on an extended milking and have not been bred back.