Over the last couple of years, the Back to Basics sessions have covered high boils, fondants and cremes. Those sessions showed you how to make both grained and ungrained confections and how their ingredients and processes would control the finished product form. The basics given then for mixing carbohydrates, usually sucrose and a corn syrup, and the effects of their ratio and final moisture on the syrup phase for texture, water activity and graining still apply in making a caramel, as well as any sugar confection.

A caramel uses your knowledge of carbohydrates and then adds milk to develop a confection with its own unique properties in flavor, color and texture, so we need to similarly understand the effects of adding milk. When adding milk, you are actually introducing three new components to your recipe: the milk proteins, the milk fat and the milk sugar.

The milk proteins can be broken down to casein and whey proteins, roughly at a ratio of 80 to 20. The casein will have most of its effect on texture, making the confection chewier, adding more body and giving it some elasticity. The whey proteins most affect the color and flavor that we are so familiar with.

The milk fat helps in flavor and also in texture by reducing stickiness and softening the bite. The fat in the amount of milk we add is not enough to do a good job, so additional fat is added, either as more milk fat or more commonly as hydrogenated vegetable fats. The melting curve of the fat used will have a significant effect on the finished caramel texture, flavor and product stand-up. Milk fat provides the rich, flavorful profile but will result in a soft piece due to its low melt point and a shorter shelf life due to its unstable fatty acids. The higher-melt hydrogenated fats will help firm up the caramel without making it much chewier or tougher and help it have a longer shelf life as they are more stable, but will not contribute as much to the rich flavor.

The milk sugar is lactose. It provides a low intensity sweetness, but keep in mind that it is not very soluble and its low solubility can be a concern in how it processes and its effect on the finished piece.