

Column Name - The Heartland Minute

By: Ben Sims

K-State Research and Extension Greenwood County

Agriculture Extension Agent

“Science Experiments or Holiday Candy?”

Sometimes when making candy, it can feel like a food science experiment. According to K-State food scientists, Karen Blakeslee, “Candy is basically divided into two categories: crystalline or non-crystalline.” Fudge is an example of a crystalline candy that requires special attention during the cooking process.

You have to be careful when making fudge because sometimes little crystals can form inside and give a grainy feeling in your mouth. Some crystals are acceptable, but the goal is to limit the size of crystals that form when you’re making fudge or other crystalline candies. The size of the crystals should be very small to reduce the chance of a grainy texture. Creams and fondant are additional examples of crystalline candies, that should be smooth, creamy, and easy to chew.

Fudge is basically chocolate, corn syrup, butter and sugar, and maybe vanilla or other flavoring such as peppermint. Butter is key to a quality end-product. It is recommended to not use margarine or another substitute. Butter is important because the fat in cream helps prevent crystals from forming when making your fudge. Corn syrup can also help to prevent crystals from forming in fudge.

If water gets into the product during the cooking process, crystals can form, so it becomes a balance between controlling the heat, how long you cook it, and watching for any kind of excess moisture. Even humidity in the air can be absorbed into a candy and cause problems. It really is a science experiment every time you make this type of candy.

In non-crystalline candies like toffee and peanut brittle, you don’t, you guessed it, want crystals to form, not even small ones. Did the name non-crystalline candies give it away? Other types of non-crystalline candies are lollipops, caramels, and nougats.

With non-crystalline candies, the sugar mixture is cooked to higher temperatures, such as the hard crack stage. During cooking, moisture evaporates and the temperature rises higher than the boiling point of water. Reduced moisture content and rapid cooling are key factors in making non-crystalline candy. Limit stirring to help reduce the formation of crystals. Some cooks choose to add baking soda to brittle, which lowers the acidity and makes the candy more brittle or more porous. This in turn, makes the candy easier to break, bite and chew.

Happy New Years, everyone!

Information comes from K-State University food safety specialist and coordinator of the Rapid Response Center, Karen Blakeslee.

For more information regarding Agriculture and Natural Resources, 4-H Youth Development, or K-State Research and Extension call the office at 620-583-7455, email me, Ben Sims, at benjam63@ksu.edu, or stop by the office which is located inside the courthouse. Be sure to follow K-State Research and Extension- Greenwood County on Facebook for the most up-to-date information on Extension education programs and the Greenwood County 4-H program.