The Effect of Sugar Replacers on Dough and Bread Quality of Wheat Flour Dough Systems.

Dr. Jon Faubion and Dr. Hulya Dogan, Project Leader(s)

Cooperators:

Graduate Student: Sherrill Cropper

Goals: Brief description

- The objective of this research is to determine the functional properties of sugar replacers as alternative for sugar in the wheat bread dough system in order to determine how they affect water absorption, gas production, dough rheology, texture, volume, crumb cell structure, and post baking texture of the final product.

Statement of Problem:

There has been a growing market demand for healthier food products due to many health concerns associated with obesity. More and more consumers are looking for foods that are lower in calorie, reduced fat, and sugar. One of the many ways that manufactures are trying to help meet the consumer demands is by the utilization of sugar replacers as alternatives for sugar in food systems. High intensity sweeteners such as aspartame, saccharine, and sucralose have been used in many food products as an alternative for sugar. In a bread dough system, sugar is utilized as a food source for the yeast. However, the use of sugar alternatives in a bread dough system has not been thoroughly studied. Evaluation of how well yeast utilizes sugar replacers as a food source and the impact that this substitution has on the dough and bread properties would be beneficial to determine if sugar replacers could be used as an alternative to reduce the caloric content of bread.

Current Activities:

A review of the current literature is being done to determine what type of testing has been conducted previously on sugar replacers in bread dough systems. Also, different methods for analysis of the sugar-yeast system and bread dough quality attributes are being evaluated for this specific research topic.