Using C# Programming Language to Create a Ready to Use Therapeutic Food (Rutf) Aimed at Addressing the Nutritional Needs of the Undernourished in Kenya

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In Kenya, drought conditions that are expected to persist into 2018 have left 3.4 million people severely food insecure and an estimated 500,000 people without access to water. An estimated 482,882 children will require treatment for acute undernourishment, including 104,614 who are suffering from severe acute malnutrition (SAM). (UNICEF KENYA OVERVIEW, 2017) This project investigates an innovative strategy designed to treat undernourishment at ease. By combining an assortment of local, available and inexpensive legumes, seeds and cereals grown in Kenya lipid matrix, we aim to come up with a semi-solid RUTF that will be administered by a system based on an individual's weight, height, age and gender. The primary production principles include grinding all legumes, seeds and cereals to a particle size < 200 microns, producing the food without the introduction of water, and embedding the protein and carbohydrate components of the food into the lipid matrix. (Manary, 2006) A DBMS is developed that will allow manufactures of RUTF to design tailored foods with accurate and relevant amounts of nutrients with accordance to age, height, weight, gender and state of malnourishment (PEM or MDD) of individuals after data has been uploaded onto the system for analysis. The combined use of the DBMS and the RUTF should be able to analyze different age group data accurately, use data analyzed to come up with a RUTF specific for individuals and use inexpensive and locally available legumes, seeds and cereals to come up with a palatable long lasting RUTF to counter undernourishment.

Awards Won:

Second Award of $2,000