

Optimizing Human Diet Problem Using Linear Programming Approach: A Case Study

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Abstract : Health is a common theme in most cultures. In fact all communities have their concepts of health, as part of their culture. Health continues to be a neglected entity. Planning of Human diet should be done very careful by selecting the food items or groups of food items also the composition involved. Low price and good taste of foods are regarded as two major factors for optimal human nutrition. Linear programming techniques have been extensively used for human diet formulation for quiet good number of years. Through the process, we mainly apply "The Simplex Method" which is a very useful statistical tool based on the theorem of Elementary Row Operation from Linear Algebra and also incorporate some other necessary rules set by the Simplex Method to help solve the problem. The study done by us is an attempt to develop a programming model for optimal planning and best use of nutrient ingredients.

Keywords : diet formulation, linear programming, nutrient ingredients, optimization, simplex method

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