

Stochastic Programming and C-Somga: Animal Ration Formulation

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Abstract : A self-organizing migrating genetic algorithm(C-SOMGA) is developed for animal diet formulation. This paper presents animal diet formulation using stochastic and genetic algorithm. Tri-objective models for cost minimization and shelf life maximization are developed. These objectives are achieved by combination of stochastic programming and C-SOMGA. Stochastic programming is used to introduce nutrient variability for animal diet. Self-organizing migrating genetic algorithm provides exact and quick solution and presents an innovative approach towards successful application of soft computing technique in the area of animal diet formulation.

Keywords : animal feed ration, feed formulation, linear programming, stochastic programming, self-migrating genetic algorithm, C-SOMGA technique, shelf life maximization, cost minimization, nutrient maximization

Conference Title : ICIAM 2016 : International Conference on Industrial and Applied Mathematics

Conference Location : Paris, France

Conference Dates : January 21-22, 2016