



GOAL PROGRAMMING APPROACH TO AGRICULTURE IN AFRICA: CASE OF TEFF PLANTATION IN ETHIOPIA TO GET BALANCED AND ECONOMIC NUTRIENT MIX

Tripti Sharma¹ & Zebene Girma²

¹Associate Professor, IMS Unison University, Dehradun, Uttarakhand, India

²Research Scholar, Addis Ababa Science and Technology University, Addis Ababa, Ethiopia

ABSTRACT

For sustainable crop production, adjacent fertilization practices based on concrete nutrient limitation and yield requirements for a given crop are judicious and economical[1]. Balanced fertilizers can help boost crop productivity by restoring soil conditions. A fertilizer mix is complete with the presence of nitrogen, phosphorous, potassium, sulfur, copper, zinc and boron (N-P-K-S-Cu-Zn-B). This study presents a preventive linear goal programming model for multi-objective nutrient management problem by defining an optimal plantation nutrient combination strong in Ethiopia's warm weather. A set of data was used to measure the efficiency and effectiveness of the proposed model. Formulation results mean that all goals have been achieved. With regard to the goal priorities, the proposed model is quite flexible.

KEYWORDS: *Balanced Fertilizer; Complete Fertilizer; Compost Management; Fertilizer Combination; Goal Programming, N-P-K-S-B Fertilizers; Nutrient Mix; Teff Production*

Article History

Received: 20 Mar 2019/ Revised: 02 Apr 2019/ Accepted: 31 May 2019
