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# Study of Linear Programming Problem: Use of Lingo and Excel Solver

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## Synopsis

This study presents two distinct cases: one focusing on an agricultural decision-making model and the other on a production decision model within the food industry. The agricultural model involves decision-making scenarios regarding Adhikary's land allocation problem under various constraints, including limitations on monthly budget allocation, expenditure capacity, and land usage. Conversely, the food production model addresses the production policy of the food industry under constraints related to the availability of raw materials, monthly budgetary considerations, and the availability of skilled labor. The primary objective in both cases is to optimize revenue and identify the best decision-making scenarios that enhance the overall profitability of the organization. We employ linear programming as a decision-making tool, followed by the graphical method, to illustrate how linear programming can be formulated to guide decisions regarding production, allocation, and manufacturing. We explore the utilization of Lingo software and Excel Solver to make the decision-making model more accessible and understandable to the audience.

## RELATED PRODUCTS

1) *Teaching Note*: Product Number- CHIRP-14822-TN