

## ABSTRACT

The La Compensation project forms part of the State Lands Development Project of Trinidad and Tobago. The farmers at La Compensation have always received low farm returns. Many factors may be responsible for this problem, including inadequate marketing facilities, lack of credit, poor soil moisture conditions and the lack of optimal cropping programmes. Since Government intends to alleviate the first three factors, the study concentrated on the determination of optimal cropping patterns.

The major hypothesis of the study is that optimal cropping programmes could provide the farmers with higher net farm returns. To test the hypothesis the following objectives were pursued: the estimation of the mean net farm return and the determination of optimal cropping patterns under existing conditions of risk and uncertainty.

The Minimization of Total Absolute Deviation (MOTAD) Model was used to accomplish the second objective. This model required time series data on: (a) gross margins and technical requirements for the relevant crop enterprises and, (b) resource constraints on the farms. Its solution provides a series of optimal farm plans with increasing total expected gross margin and the associated gross margin deviations. These deviations show the risk involved in each farm plan.

Two MOTAD models were constructed for average farms at La Compensation. The Pure Model uses data from a survey of farms at La Compensation carried out as part of the study. The Readjusted Model was constructed to test the sensitivity of the results to the accuracy of the data obtained in the survey.



The results support the hypothesis that current cropping patterns at La Compensation are sub-optimal and also suggest that most of the farmers are risk averters. The sensitivity test showed that the results obtained are insensitive to the accuracy of the survey data.

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