

## SUMMARY / ABSTRACT

Cereal production in the country has certain ups and downs through out the history. Number of factors have significant contribution towards the cereal production. In this thesis the cereal production has been investigated and the forecast models have also been developed for the cereal production. The brief summary of the thesis is given below,

Chapter-1 deals with the introduction of the topic along with a brief history of the cereal production in the country. This chapter also provides an overview of the subject. Objectives of the study have also been given in this chapter. Chapter-2 covers the previous work on the topic followed by chapter-3 that contains the description of the technique.

Chapter-4 of the thesis contains the analysis of the data in order to obtain a suitable forecast model for cereal production. The log transformation has been applied for the model building in order to decrease variability of the data. It is found that the suitable model for forecasting of cereal production in the country is:

$$\{\ln(cy)\}_t = 0.020 + 0.794\{\ln(cy)\}_{t-1} + 0.040\{\ln(cy)\}_{t-2} + 0.246\{\ln(cy)\}_{t-3} + 0.488Z_{t-1}$$

where  $cy_t$  is the cereal production at time "t". The diagnostic tests of this fitted model satisfy almost all the desirable criterion for a suitable time series model.