

SUMMARY

In this thesis empirical study is made to compare different estimators of population total. The study contained the comparison of Poisson Sampling, Modified Poisson Sampling, Poisson Sampling with ratio estimator, Modified Poisson Sampling with ratio estimator and the Collocated Sampling. The study has been carried out by using sixty natural populations. A brief sketch of the thesis is given below:

The main idea and introduction to basic concepts have been given in chapter 1 of the thesis. Chapter 2 contains the literature review about the unequal probability sampling in general and about poisson sampling in particular.

The model based study of poisson sampling has been given in chapter 3 of the thesis followed by the empirical study given in chapter 4.

The result of this study shows that the **modified poisson sampling with ratio estimator** is the best estimator followed by the estimator in collocated sampling. Also it has been found that the efficiency of various estimators has a decreasing trend with an increase in the value of δ . From this it can be concluded that the smaller value of δ should be used whenever one is using these procedures.