

USE OF STATISTICAL COMPUTING IN THE FIELD OF SCIENTIFIC DISCOVERY

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Since early this century routine statistical analysis of experimental data has been a part of agricultural and biological research; more recently it has become so in medical and industrial research. These analyses were greatly hampered, however, by having to perform large calculations manually or with the aid of desk calculators. The advent of modern high speed electronic computers having mass storage capacities have helped to alleviate this problem. Computers have to be controlled by a sequence of instructions called software programmes. At present there are so many high level languages such as BASIC, FORTRAN, PASCAL, APL, available, for software programming. Yet, how best to organise statistical computing is a problem faced by many researchers. One can organize statistical computing broadly under three main approaches, (a) single programmes, (b) using statistical packages (c) using a collection of sub-routines. Whichever method a researcher follows, he must understand the steps involved in the computations and realistically judge the validity of the computer analysis before drawing concrete conclusions.