

School of Basic and Applied Sciences

Course Code : AGRI 2008

Course Name: Statistical Methods



Introduction to Statistics and its Applications in Agriculture

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Program Name: B.Sc Agriculture

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Statistics

Statistics has originated as a science of statehood and found applications slowly and steadily in Agriculture, Economics, Commerce, Biology, Medicine, Industry, planning, education and so on. As on date there is no other human walk of life, where statistics cannot be applied.

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- Statistics is concerned with scientific methods for collecting, organising, summarising, presenting and analysing data as well as deriving valid conclusions and making reasonable decisions on the basis of this analysis.
- Statistics is concerned with the systematic collection of numerical data and its interpretation.
- The word ' statistic' is used to refer to Numerical facts, such as the number of people living in particular area. The study of ways of collecting, analysing and interpreting the facts.

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Definition of Statistics

Statistics are numerical statement of facts in any department of enquiry placed in relation to each other. - A.L. Bowley

Statistics may be called the science of counting in one of the departments due to

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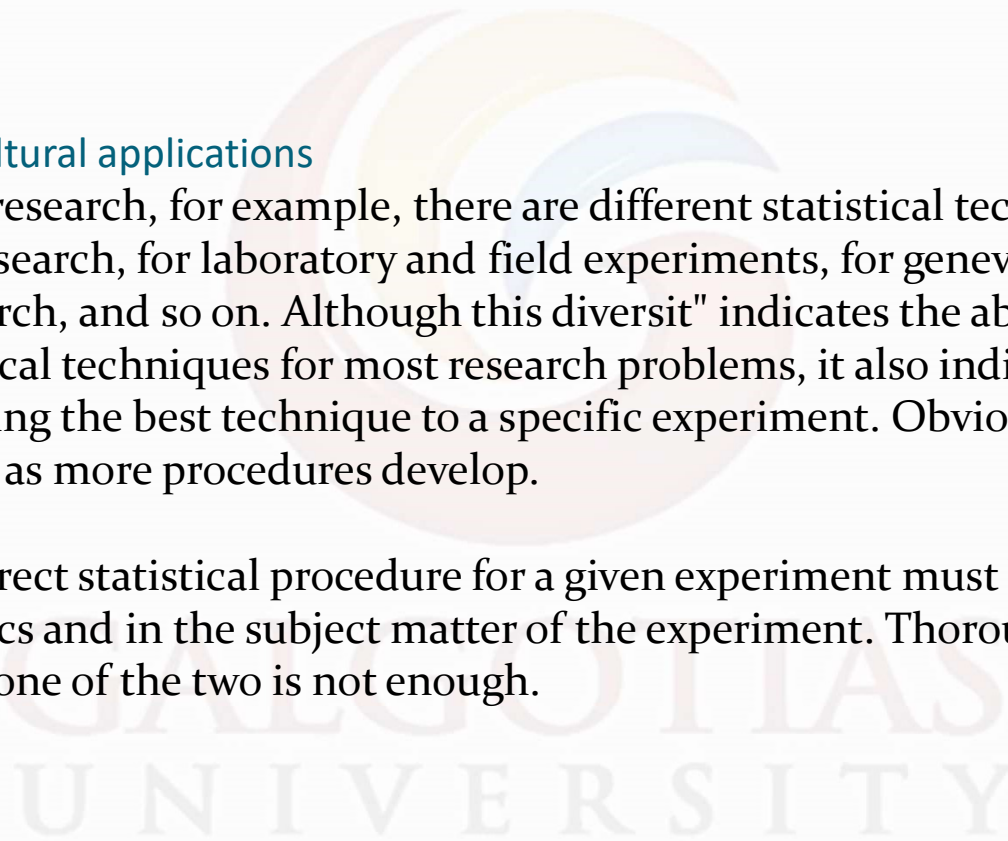
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Statistics and agricultural applications

- In agricultural research, for example, there are different statistical techniques for crop and animal research, for laboratory and field experiments, for genetic and physiological research, and so on. Although this diversity indicates the ability of appropriate statistical techniques for most research problems, it also indicates the difficulty of matching the best technique to a specific experiment. Obviously, this difficulty increases as more procedures develop.
- Choosing the correct statistical procedure for a given experiment must be based on expertise in statistics and in the subject matter of the experiment. Thorough knowledge of only one of the two is not enough.



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- For most agricultural research institutions in the developing countries, the presence of trained statisticians is a luxury. Of the already small number of such statisticians, only a small fraction have the interest and experience agricultural research necessary for effective consultation. Thus, we feel the best alternative is to give agricultural researchers a statistical background so that they can correctly choose the statistical technique most appropriate for their experiment.
- For research institutions in the developed countries, the shortage of trained statisticians may not be as acute as in the developing countries. Nevertheless, the subject matter specialist must be able to communicate with the consulting statistician. Thus, for the developed-country researcher, this volume should help forge a closer researcherstatistician relationship.

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