



BIHAR ANIMAL SCIENCES UNIVERSITY, PATNA, BIHAR
BIHAR VETERINARY COLLEGE, PATNA



UNIT-I

Aims, Field and Types of Statistics

Speaker: Ramesh Kumar Singh
Assistant Professor cum Jr. Scientist
Division of Animal Genetics and Breeding
Bihar Veterinary College, Patna

INTRODUCTION

- Statistics require data as a raw material upon which its methods or techniques applied to arrive at inferences to make wise decisions.
- Data may be quantitative as well as qualitative.
- The data are collected either by experiments or by survey methods and they are tabulated and analyzed statistically.
- Analysis of data yields values, from which proper and correct inferences have to be drawn from these numerical values. The inferences lead to a final decision.

FUNCTIONS OF STATISTICS

- Collection of data
- Tabulation of data
- Analysis of data
- Interpretation of results.

AIMS OF STATISTICS

- (1) to organise & summarize the data.
- (2) to reach at decisions about a large body of data by examining small part of the data.
- The Concept, theory and methods to reach first and second objectives is called as descriptive statistics and Inferential statistics, respectively.

FIELD OF STATISTICS

- The field of statistics provides some of most fundamental tools and techniques of the scientific methods.
- It is applied in followings:
 - Forming hypothesis
 - Designing experiments and observational studies
 - Gathering data
 - Summarizing data
 - Drawing inferences from data
- These activities finally useful to make decisions in the face of uncertainty.
- A statistic also refers to a numerical quantity computed from sample data.

FIELD OF STATISTICS

- The field of statistics can be divided into
 - Mathematical statistics – the study and development of statistical theory and methods in the abstract.
 - Applied statistics: - the application of statistical methods to solve real problems involving randomly generated data & the development of new statistical methods motivated by real problems.
 - Biostatistics is the branch of applied statistics directed toward applications in the Health, Science and Biology.
 - Statistics is a field of study which concerned with collection, organisation, summarization and analysis of data and drawing of inferences about a body of data when only a part of the data is observed.

TERMS

- **Biostatistics** is the branch of applied statistics directed toward applications in the Health, Science and Biology.
- **Biostatistics** is a branch of statistics where statistical techniques are used on biomedical data to reach a final conclusion.
- **Statistics** is a field of study which concerned with collection, organisation, summarization and analysis of data and drawing of inferences about a body of data when only a part of the data is observed.

TERMINOLOGY

- Variables – If as we observe a characteristic, we find that it takes on different values in different persons, places or things, we label the characteristics a variable.
- Quantitative Variable – is one that can be measured.
- Qualitative Variable – is one that can be categorized by means of measuring.
- Characteristics – Variable – Random – Qualitative and Quantitative
- Random Variable – When measure height then, the result is frequently referred as value of the respective variable.
- When the values obtained arise as result of chance factors, so that they cannot be exactly predicted in advance, the variable is called a random variable.
- Discrete Random Variable – A discrete variable is characterized by gaps or interruptions in the values that it can assume.
- Continuous Random Variable – A discrete variable is characterized by no gaps or interruptions characteristics of a discrete variable.

Thanking You