Data collection and analysis in farming system study

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Concept

- The ultimate objective of data collection and analysis is to prepare a report and communicate the results to the users who have general interest
- In hence data collection, processing, presentation and analysis are considered important

Data collection

- For analysis data are to be collected properly and accurately
- A well-organized interview schedule should be prepared for collecting necessary data more quickly and accurately
- Questions should be properly presented/explained to get precise and reliable answers
- PRA is often used for collecting quality data at different stages of FFS study

Data processing

- After data are gathered and recorded, they must be edited, weighted, calculated and interpreted
- Data processing includes the following activities:
  a) Check data for accuracy and completeness
  b) Reduce mass of details to manageable ones
  c) Present data in tabular form for analysis
  d) Analyse data to bring out important points
  e) Interpret results

Presentation of data

- Results should be presented in a clear concise manner to be effective
- There are two ways of presenting data: tabular and pictorial presentation
  (**a)Tabular presentation**: two types:
  (i) General purpose table: constructed to present either a summary overview or a large amount primary data in a convenient form
  (***ii) Special purpose table***: prepared to illustrate some specific points or points about the data forming part of the logical investigation
  (b) Pictorial presentation
  - Results are presented in a figure
  - A good picture can tell a story better than thousand words
  - Commonly used pictorial devices are: graphs, scatter diagrams, histograms, bar charts, pie-charts and frequency distribution

Analysis

- To determine and present the economic impact of the trials, various techniques for economic analysis have been developed

- These are: partial budget analysis, gross margin analysis and benefit cost analysis
- These techniques explore the profitability of a technology
- Thus serve important purpose while screening new technologies for on farm research

Partial budget analysis

- Tabulation of expected gains and losses due to relatively minor change in farming system or method
- Example includes- replacing one species by another one in stocking the pond or introducing fertilizer or feed
- It is method of balancing and examining the total gains (benefits) and losses (costs) that will result if a change is made in a part of the farming system

Gross-margin analysis

- It is the difference between the gross income of a farm activity and it's variable costs i.e., it is the estimate of return of variable costs for a given activity
- Gross margin= Gross income-variable costs

BCR (Benefit-cost ratio)

CBR (Cost-benefit ratio)