

Written in simple language with relevant examples, **Statistical Methods in Biology: Design and Analysis of Experiments and Regression** is a practical and illustrative guide to the design of experiments and data analysis in the biological and agricultural sciences. The book presents statistical ideas in the context to which they are being applied, drawing on relevant examples from the authors' experience.

Taking a practical and intuitive approach, the book includes mathematical formulae only where this helps to formalise and explain the methods being applied, providing extended discussions of examples based on real data sets arising from scientific research. The authors analyse data in detail to illustrate the use of basic formulae for simple examples while using statistical packages for more complex examples. The associated website (www.stats4biol.info) shows how to obtain the example analyses in the GenStat®, R and SAS® statistical packages. This online material provides a basic introduction to the facilities in each package, with code for all of the examples and half of the exercises in each chapter.

By the time you reach the end of the book and online material you will have gained:

- A clear appreciation of the importance of a statistical approach to the design of your experiments,
- A sound understanding of the statistical methods used to analyse data obtained from designed experiments, and of the regression approaches used to construct simple models to describe the observed response as a function of explanatory variables,
- Knowledge of how to use statistical packages to analyse data with the approaches described, and most importantly,
- An appreciation of how to interpret the results of these statistical analyses in the context of the biological or agricultural science within which you are working.

The book concludes with a practical guide to design and data analysis. Overall, it gives you the statistical understanding required to successfully identify and apply these statistical methods to add value to your scientific research.



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