

## *DECISION MAKING IN FOREST MANAGEMENT*

M. R. W. Williams

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Decision-making consists of two components: the generation of alternative courses of action and the selection from these of the best course of action. To aid in this selection process certain criteria are used. Generally these are of an economic nature and readily lend themselves to quantitative methods of analysis. Probably the oldest such criteria in forestry are the 'land expectation value', proposed by Martin Faustmann more than a century ago, and the related 'financial yield'. Although the approach has been modified somewhat, and the terms 'net discounted revenue' and 'internal rate of return' are now more familiar, the principle remains essentially the same.

The author is Lecturer in Forestry at the Cumbria College of Agriculture at Newton Rigg. His expressed hope is to present the material in a simple and explicit form and in this he has succeeded. In his introduction he lists the types of decisions a forest manager has to make, such as: How much to pay for land? What species of tree to grow? Should money be spent on ground-preparation, fertiliser application, brashing, high-pruning? What is the optimum rotation? The reader is then taken through a number of chapters which explain the intricacies of compounding/discounting in relation to various time scales plus the preparation of price size gradients and money yield tables. This leads to structuring of the two criteria, net discounted revenue and internal rate of return. The remaining chapter deals with the application of those two criteria to the type of forestry problem mentioned above.

Treatment of the material is meticulous and detailed, but the large number of tables and figures can sometimes lead to confusion. As a primer for the forestry student or woodland manager anxious to grasp the essentials of compounding/discounting and the application of net discounted revenue to valuation and appraisal problems, the book is extremely useful. However, the absence of any attempt to computerise routine calculations of net discounted revenue and internal rate of return is disappointing in a book published in 1981. Following on the basic calculations with the aid of discount factors, this would have removed much of the boredom associated with repetitive discounting with varying rates.

The author acknowledges the contribution made by the "thoughts, ideas and inspirations from 'classical' German foresters, from W. E. Hiley and Messrs. Johnston, Grayson & Bradley". Those who have read "Economics of Plantations" and "Forest Planning" will find nothing new in this book and indeed there are aspects of decision-making in "Forest Planning" which scarcely get mention. The emphasis on decision-making conveyed in the title evokes an image of sophisticated analytical procedures using maximisation and simulation models, but the reader will look in vain for any mention of such. Neither is there any reference to decision-making criteria where "unpriced values" such as recreation and amenity are involved. Any serious text on modern decision-making methods in forest management must take account of such techniques. Their omission limits the scope of application to one of investment appraisal and land evaluation by traditional criteria.

The book is sponsored by the Royal Forestry Society of England, Wales and Northern Ireland, and is the first in the Forestry Research Studies Series. From the sales point of view it is somewhat unfortunate that it duplicates much of the subject material covered in "Investment Appraisal in Forestry" (R. J. N. Busby and A. J. Grayson) which sells at £3.75 sterling (see *Irish Forestry*, Vol. 38, No. 2, p. 102 for review).

P. M. Joyce