

## Book Review

### **QUEENSLAND'S RAINFALL HISTORY — graphs of rainfall averages 1880-1988**

Jacqi Willcocks and Philip Young (eds), (1991). Queensland Department of Primary Industries, Information Series QI91002. 304 pp. A\$60 plus \$7.50 postage in Australia. Available from QDPI Publications, Queensland Department of Primary Industries, GPO Box 46, Brisbane Qld 4001, Australia.

Those of us who are involved in agriculture commonly have an eye on weather because it has such a profound influence on our industry. Rainfall is particularly important in this regard. Unfortunately our recollections about rainfall are flavoured by a relatively short working life, compared to the length of rainfall records that is, and by a memory that is less than perfect. Further, the reliability of our memory is probably inversely related to the length of our working life. It is no wonder, therefore, that the history, pattern and trends in amount and distribution of rainfall are topics of wide debate and concern. This book will not stop these discussions but it will provide a quantitative base for the ongoing debate.

The book displays the long-term records for 269 rainfall stations in Queensland. The stations, one to a page, are arranged in alphabetical order for four separate geographical regions in the state; north, central, south-east, south and western Queensland. Historical records, commencing between 1880 and 1900 for most stations, are displayed in four formats:— a graph of annual rainfall over time, a graph over time of the five-year moving average for summer and winter rainfall, a graph over time of the ten year moving average for summer and winter rainfall, and a table of the probability distribution of monthly rainfall. Average values are displayed as an insert. The latitude and longitude for each station are listed

in front of the book, but not on the data page for each station.

The graphs clearly display the wide variation in annual rainfall, the relative magnitude of summer and winter rainfall, and the pattern of distribution over time. For example the ten-year moving averages for Brisbane show a distinct peak in summer rainfall around 1900 and 1980; no wonder our memory on rainfall history is fallable. Also, the graphs, combined with the logical arrangement of stations, permit the records for different locations to be compared in a convenient manner.

The table of probability of monthly rainfall is an attempt at risk analysis, since the percentage of years with a rainfall greater than or equal to the tabulated amount can be determined. Further, the accompanying statistics, (mean, standard deviation and range) provide added insight into the vexed problem of rainfall variability.

Overall the book presents an analysis of a vast array of rainfall records and the resulting statistics in a simple, easy to follow, and uncluttered manner. In this regard it will be a useful reference for anyone seeking information on rainfall at different locations in Queensland. The relationship between the amount of rainfall and Southern Oscillation Index is mentioned in the introduction to the book but is not mentioned for individual stations. Such an additional analysis would detract from the elegant simplicity of this presentation and is handled by a special computer package, RAINMAN. The book is an excellent starting point for a serious study of the rainfall in Queensland and is good value. However the binding needs to be more robust to withstand regular use.

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