Principles of Crop Improvement. *By* N. W. Simmonds. 408 pp. £ 7.95. Paperback. Longman Group Limited, London.

This book is aimed at the honours degree – early post-graduate level of students. It has 10 chapters. The first chapter on Crop Evolution is based on his earlier book, The Evolution of Crop Plants. This is followed by chapters on Basic Features of Plant Breeding, Objectives of Plant Breeding, Basic Concepts of Plant Breeding including population genetics, Breeding Techniques for Self and Open pollinated Crops, Field Trials and Designs of Experiments, Problems of Disease Resistance and Evolution of Varieties for Resistance, Cytogenetic Features concerned with Plant Breeding and Induced Mutations, New Crops and Genetic Conservation, and the last chapter deals with Economic Effectiveness of Agricultural Research (specially plant breeding) and Development. The book contains a bibliography with 879 references, an index of crops, and a general index.

The appearance of a book on crop improvement incorporating recent progress is welcome. The book contains a good deal of information, but the presentation is not engrossing and the writing style is not appealing. This reviewer found also innumerable grammatic errors. eg., page 82, under Polygenic variation.

There are 40 diagrams in the book. Many of them are of the flow diagram kind. The author has tried to include a considerable load of information in these with the result that most of them are difficult to understand even after considerable effort. Attempts have been made to explain even some of the basic concepts through complicated diagrams. e.g., Figs. 5.2, 5.3, and 5.4, for mass selection.

The repeated references to other sections and chapters, as well as, sentences and phrases in brackets, have in the opinion of this reviewer, adversely affected the presentation style of this text book.

Many paragraphs begin with statements like the following; "This section is mainly a matter of definition. First let us remined ourselves that a locus be known only if it least two alleles have been detected there". Again, "We shall start with a brief account of the terminology and assessment of gene expression as a preliminary and then go on to population-genetic ideas *per se*" (page 71). "The best definition of a 'character' for the breeder is what he says it is. From the point of view of selection, uniform characters controlled by major genes present no problem (as we see above), and may be ignored" (page 99).

Further, the smooth flow of the subject matter is also affected by innumerable abbreviations. Though these abbreviations have been explained elsewhere in the text, for a casual reader of a specific portion, the sentence may not make sense. e.g., on page 267: "Significantly, the many known VR genes that confer resistances to the two rusts of the crop have hardly been used as such by breeders; they have been obviated by very effective polygenic resistance (HR, but may be with a VR component) in both OPP and HYB". On page 268: "To the extent that narrowly based HYB approach CLO and IBL in uniformity they will need to be treated like them rather than like the more adaptable OPP from which they came".

The author has "deliberately minimized references in the text because they are obstructive of a reasonably smooth exposition", and he has confined author-year citations to the end of the chapter. Hence, it is not possible to correlate a particular portion of the subject matter to the references given at the end.

The subjects could have been better organised by giving sections on mode of reproduction, genetic and cytogenetic basis of plant breedings, preferrably under chapter 2, or

as a separate chapter. Discussions on these basic plant breeding concepts are scattered throughout the book. Topics like role of polyploidy, induced mutations, and cytoplasmic sterility in plant breeding are only peripherally treated.

On the whole, "this will not be found to be an easy book" (in author's words) to read and study.

The format and general appearance of the book are of good quality and the price is reasonable. (M. K. NAIR, Central Plantation Crops Research Institute, Regional Station, Marikunnu, Calicut-673 012, Kerala, India).