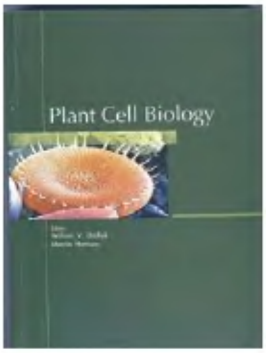

Plant Cell Biology. William V. Dashek and Marcia Harrison (eds). Science Publishers, Enfield, P.O. Box 699, New Hampshire 03784, USA. 2006. 494 pp. Price: US$ 30.80.

This book deals with the cellular aspects of plant biology, form and function. Although there are numerous textbooks on cell biology, the emphasis in most of them is on animal systems. Since plants are sessile organisms, they have evolved some unique mechanisms to adapt themselves to the ambient environment, modulating their cellular activities. Hence there was indeed a need for such a book. The present volume stresses on basic concepts and highlights some of the recent developments, citing original research papers. Extensive use is made of computer spreadsheets and statistical packages. Therefore, emphasis is on enhancing the analytical ability of the student and to appreciate scientific methods for research.

The first three chapters, although preliminary, are still informative because summaries of a few laboratory methods and practical approaches are provided, which can be handy for an inquisitive mind to derive more information. There is emphasis on basic chemical principles and two chapters are on the structure and function of biomolecules. The current understanding of cell division and its control mechanisms has been covered in two separate chapters, separately dealing with mitosis and meiosis. To reiterate some points of fundamental interest in the chapter on mitosis, they have been highlighted as 'Overview of the concepts' at the end of the chapter. The chapter on Mendelian genetics is extensive and covers concepts and fundamentals essential for undergraduate as well as postgraduate students. The chapter on protein synthesis is rather short, probably because it is dealt with in greater detail in other, more popular cell biology textbooks available! The chapters on respiration and photosynthesis also provide sufficient detail to the reader, but in a cell biology book it would have been more appropriate to give greater emphasis on structure–function relationship. There has been tremendous progress in the past 10–15 years in the realm of plant signal transduction. These studies have revealed that plants, in many respects, are closer to lower organisms than to their animal counterparts with respect to their signalling mechanisms. Therefore, an attempt has been made by the authors to update the readers on this aspect in the chapter on 'Plant hormones and signal transduction', although it falls short of expectation. The title of the chapter is somewhat misleading, because hardly anything has been discussed with respect to hormone biosynthesis or their biological activity. Moreover, there is tremendous development in the area of light signal transduction in plants, and it is only in the recent past that knowledge on plant hormone signal transduction has advanced. Despite some unique features of the book, one's expectation is rather short-lived, as amongst the 14 chapters dealt with by various authors, only five are plant-specific. It is surprising that all sub-cellular organelles are covered in one chapter. There appears a definite attempt in presenting up-to-date information available on the subject, especially with listing of references under specific subjects, listing of important journals, etc., yet there is an apparent lack of depth in most of the topics covered. Thus, the target group of this book would be those who need basic and preliminary information and not those who seek detailed and comprehensive information.

In fact, the textbook is best described as one that provides insight into various cellular and biochemical processes, rather than focusing on plant cell biology.

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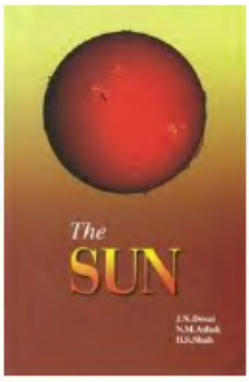
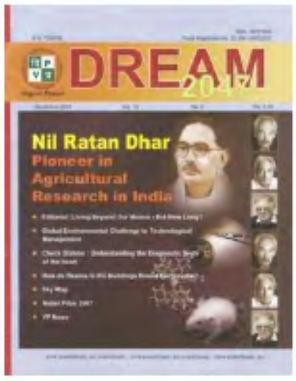


Vigyan Prasar has recently brought out a book exclusively devoted to solar physics titled *The Sun* by J. N. Desai, N. M. Ashok and H. S. Shah. It is a slim book of five chapters: The sun; The sun as a star; Magnetic activity of the sun – present and past; The sun: A source of particle radiations, and The sun above its photosphere – The chromosphere and the corona. The book has covered substantial amount of work done by Indian scientists and their contributions to solar physics. It is a useful guide to those interested in astronomy at large and specifically addresses those interested in teaching advances in different aspects of solar physics. It has a large number of illustrations and a glossary explaining the difficult terms used. The book has 102 pages consisting of illustrations and photographs, and is priced at Rs 75.



In the Foreword, the Director of Vigyan Prasar, V. B. Kamble, reiterates that the objective is to bring out quality publications on a variety of topics in science and technology at affordable prices to popularize science and to instil a sense of wonder among young readers towards science.

Vigyan Prasar also has brought out a Newsletter titled *Dream 2047*, priced at an affordable Rs 5. The December 2007 issue (vol. 10, no. 3) has readworthy articles on Nil Ratan Dhar, pioneer in agricultural research in India; an editorial titled 'Living beyond our means – But how long?', as well as an article on the Nobel Prize 2007 amongst others.