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0521373506 - Fruit and Seed Production: Aspects of Development, Environmental Physiology and Ecology

Edited by C. Marshall and J. Grace

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Flowering and fruiting are key processes in the biology of higher plants, ensuring the transfer of genetic material from one generation to the next. In addition, as almost all of the world's agricultural and horticultural industries depend on the production of flowers, fruits and seeds, the study of the reproductive biology of cultivated plants is of fundamental importance to humankind. Surprisingly, therefore, this topic has received relatively little attention from environmental physiologists compared with studies on the growth and development of vegetative structures. This book, based on a meeting held by the Environmental Physiology Group of the Society of Experimental Biology, sets out to correct this deficiency. The topic is given a broad and comprehensive treatment, with chapters covering the onset of flowering through to the development and growth of fruits and seeds, and finally to ecological and evolutionary aspects of fruiting. This volume will therefore serve as a useful introduction to the various aspects of flowering and fruiting and will also provide a thorough general overview of the subject for students and researchers alike.

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SOCIETY FOR EXPERIMENTAL BIOLOGY
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**Aspects of development, environmental
physiology and ecology**

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Preface

Flowering and fruiting are the key processes in the biology of higher plants that ensure the transfer of genetic material from one generation to the next. Furthermore, almost the whole of the world's agricultural and horticultural industries depend upon the production of flowers, fruits and seeds, and so the reproductive biology of cultivated plants is of fundamental importance to humankind. However, it is surprising that compared with studies on the growth and development of vegetative structures, reproductive biology seems to have received somewhat less attention from environmental physiologists.

Previous meetings of the Environmental Physiology Group of the Society for Experimental Biology have considered various aspects of vegetative growth in some detail and these have resulted in SEB Seminar Series publications on *The Control of Leaf Growth* (Cardiff Meeting, 1984), *Root Development and Function* (Bangor Meeting, 1985) and on *Plant Canopies* (Nottingham Meeting, 1986). It thus seemed timely to devote a meeting to various aspects of reproductive growth and development and so this became the subject of the 1990 meeting of the Environmental Physiology Group at the Society's annual conference at University of Warwick. It was agreed from the outset that this topic should be approached on a broad front, from the onset of flowering to the development and growth of fruits and seeds, and finally to ecological and evolutionary aspects of fruiting. Thus future meetings of the Group can focus more narrowly on topics such as seed growth and development.

We hope this Seminar Series publication will be of interest to a wide range of pure and applied plant biologists with interests in the reproductive biology of higher plants. By its broad approach it should serve as a useful introduction to the various aspects of flowering and fruiting for final-year undergraduates and research students, and also provide a volume of interest for established plant scientists who wish to obtain a general overview of the subject.

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