

Foreword

I am very pleased to have been asked to provide a foreword for this authoritative account of the chemical interactions and linkages between garden plants and practices and chemistry, as these subjects are rarely referred to in any detail, even in books devoted to the science of gardening.

While opinions, often entrenched, are expressed on the use or misuse of chemical sprays for controlling weeds, pests and diseases and the effects on plants of the application of inorganic or organic fertilisers, seldom is any consideration given by gardeners, whether professional or amateur, to the ways in which chemistry is so intimately connected with their own hobby or profession and its importance in understanding the plants they grow and their cultivation.

As Dr Hanson indicates in his Preface, chemistry and chemical ecology play a central role in determining a great deal of what happens in gardens and the numerous chemical interactions that take place between the soil and the plants we grow. As a non-chemist with only distant memories of the structures of amino acids, polysaccharides, polyketides and many other chemical compounds mentioned here and once studied in relation to my botanical background, I read this book with a degree of trepidation. I need not have had concerns, however, as it is written in a very informative style that follows a logical pattern throughout with, subject by subject, linkages between the chemistry and the elements of gardening being clearly established.

Dr Hanson has concentrated primarily on the most interesting chemical and ecological compounds that are important in terms of the cultivation of vegetables, fruit and ornamental plants, the soil in which they grow and the natural interactions between plants and the insect pests and disease organisms that attack them. Throughout this book there is a wealth of information on the natural chemical background

upon which so many garden plants depend both to survive and thrive. These include natural defence mechanisms – anti-feedants within plants – to help combat insect pests and diseases; root exudates as in lily-of-the-valley to deter the spread of competing plants; the chemical background to colour and scent in garden plants and to the medicinal properties attributable to the cardiac glycosides in foxgloves; and the anti-bacterial and anti-fungal activity of allicin derived from garlic. These are just a few of the wide-ranging subjects covered in this stimulating account of chemistry in the garden.

While this book is primarily aimed at fellow chemists who are keen gardeners, it provides much factual and very useful information that will also be of considerable interest and value to professional and amateur gardeners as well as degree level students in the natural sciences who I trust will enjoy and benefit from its contents as I have.

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