
BOOK REVIEWS

Trace Elements in Indian Agriculture—An Annotated Bibliography 1941-1982. by L. L. Somani (Agricole Publishing Academy, D-76 Panchasheel, New Delhi 110 017) 1982, pp. 276, Price: Rs. 150/- or U.S. \$30.00

Application of micronutrients to different crops in India is not a regular practice. Though the importance of many of the trace elements for crop growth and development is well documented, inadequate use of different micro-nutrients in India is mainly due to the lack of adequate information on the effect of these on the crop plants. The critical levels of trace elements required in specific crops and the response, to added micronutrients depend on the availability of these in the soil and on the soil properties. In view of these aspects it is very essential to have critical analysis of the work already carried out, on the micronutrients in our country, with particular reference to the crops of local importance.

In this book the author has compiled all the relevant literature (709 references) on micronutrient work in India. The bibliography has included, the references on the effect of micronutrients on the growth, and the biochemical aspects on Agricultural and Horticultural crops, and also the soil factors affecting the availability of different nutrients. The micronutrient status in different areas in India and also the interaction effects are also covered. The micronutrients covered in the bibliography are Aluminium, Boron, Cadmium, Chloride, Chromium, Cobalt, Copper, Fluoride, Gallium, Iron, Lead, Lithium, Manganese, Molybdenum, Nickel, Selenium, Silica, Tungsten, Vanadium and Zinc.

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Forest Ecology, Phytogeography and Forest Conservation—edited by G. S. Puri, V. M. Meher-Homji, R. K. Gupta and S. Puri, (II edition), Vol. 1, (Oxford & IBH Publishing Co., 66, Janpath, New Delhi 110 001) 1983, pp. 549, Rs. 175/-.

This is the first volume of a much expanded second edition of G. S. Puri's Forest Ecology. While a pioneering work, Puri's earlier Forest Ecology was much flawed, full of errors and assertions based on incomplete information. This volume of the second edition

is a much more scholarly and sound piece of work, thanks no doubt to the induction of two of the country's leading plant geographers and ecologists, Meher-Homji and Gupta as co-authors. The volume under review primarily concerns itself with the distribution of plant taxa and vegetation types over the Indian sub-continent and does ample justice to this theme. The chapter on floristic ecology exhaustively reviews the distribution patterns of plant taxa in relation to their biogeographic affinities and origins. The chapters on vegetation geography are even more exhaustive and present in detail most of what has been done in this field to date. These make accessible the important work of Gaussen, Legris and others of the French Institute, Pondicherry in one place. The only criticism of this material is that it tends to be somewhat repetitive in places. One also wishes that better justice was done to the Himalayan vegetation in the excellent chapter on "Holistic classification of vegetation". The maps on vegetation of Peninsular India are very useful and one again feels the absence of comparable maps on Himalayan vegetation. On the whole, the book is a most useful contribution, albeit a little too bulky. One also wonders why a book needs a preface and a forward and an introduction to each edition. Scientists should not really indulge in such sales tactics. But this is a minor criticism of a very worthwhile effort.

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Prize Winning Essays of the All India Essay Competition on Environmental Education for School students: (Department of Environment, Government of India), pp. 415, Price: Not known.

The compilation of the Prize winning essays on Environment Education for school students brought out by the Department of Environment, Government of India, is indeed a praise-worthy effort. The enormous changes brought about by the industrial revolution in the environment and consequently the deterioration of the quality of life of the human beings have in recent years led to an introspection of the action of man's intervention in the nature's order of things and what the future holds for the present young generation. This calls for a greater degree of awareness by the children and community at large. The

involvement of school level children in the All India level essay competition on environmental issues is a step in the right direction.

The topics are: 1) Science, Society and Environment. 2) My view of world in 2000 A.D. if environment is not protected. 3) Role of water management in our life. 4) How students can propagate environment awareness. 5) Role of tree plantation in protection and 6) Wild life-our heritage.

'Role of tree plantation' seems to be the choice of many with 460 entries followed by 374 essays on 'Wildlife', 104 on 'Science, Society and Environment' and 98 on the topic 'My view of the world in 2000 A.D.'. Interestingly, only 24 have chosen to write on the 'Role of water management'. This reveals to a certain extent that this has something to do with the emphasis on the aspects of treeplanting and wildlife. The holistic approach to environment is still to be understood by a vast majority of the populace.

The majority have chosen to write in the English language (721) with 259 in Hindi. Marathi, Bengali and Urdu have only 8, 2 and 2 contributors respectively. Kashmiri, Assamese, Sanskrit and Sindhi languages are not represented.

Regionwise, Andhra Pradesh, Bihar, Tamilnadu, Delhi and Karnataka have the largest number of entries in that order. Tamilnadu has carried away the maximum number of prizes followed by Bihar and Andhra Pradesh. Whether this indicates a better con-

cern and awareness of the environment in these states is difficult to judge.

The contents of the essays indicate a considerable effort by young authors to get at interesting facts, like 'colonel Pollock, a military engineer, shot a rhino or buffalo for breakfast almost everyday'. 'Villagers of Jangira, South of Bombay went out and killed 200 cheetahs and paraded their kill to celebrate India's first Independence day'.

There are some amusing statements too, like 'The Kaziranga sanctuary shelters the one-horned rhinoceros, one of the world's rarest and *peculiar monsters*' and '*Four horned* antelope is the only antelope with, *four horns* in the world today'!

The Department of Environment is to be complemented in bringing out this volume which goes a long way in bringing out an awareness of the environment in children to think of a better tomorrow. Perhaps in the future years, children may be encouraged to take up specific case studies on environment aspects and present their findings. This would orient them towards the solutions to environmental problems.

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ANNOUNCEMENT

VEB CARL ZEISS JENA EXHIBITION AT LEIPZIG SPRING FAIR 1983

Highly efficient microelectronic modules, integrated or peripheral, are the distinctive features of the optical precision products exhibited by the 1983 Jena combine. The displays include over 40 new and improved items. The progress made in performance capabilities is reflected throughout the product range 'from micro to macro'-from new series of microscopes to new generations of equipment for remote sensing air and space. Pride of place is given to surveying instruments. This line started at Jena 75 years ago has now been completed.

A brochure entitled "Information 1983" which is a supplement to JENA REVIEW contains complete information (with photographs) of the novel and improved products of VEB Carl Zeiss Jena, exhibited during the Spring Fair, 1983.

Further information may be had from Dr Josef Wustelt, Editor-in-Chief, JENA REVIEW, VEB Carl Zeiss Jena, DDR-6900 Jena, Carl-Zeiss-Str. 1 German Democratic Republic.