

A photograph of a lush green agricultural field. In the foreground, there are rows of young rice seedlings. In the background, two workers wearing hats and light-colored clothing are bent over, tending to the plants. A wooden trellis structure is visible in the distance. The overall scene is bright and sunny.

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Prem Nath



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FOREWORD

Since my birth, my journey of seventy five years of life, I have been associated with plants. Though I was an urban boy during my childhood, I knew plants and sometimes grew flowers in the large garden of my parents where I lived. When I grew I joined the Bihar Agricultural College, Sabour, from where I got my Bachelor's degree in Agriculture and further studied at the Kansas State University, USA, for post-graduate degrees. All along I remained associated with agriculture and horticulture.

My professional life in agriculture started during late 1962 when I started teaching and understanding research in horticulture and spent most of my time with the students and experiment stations at universities and institutions in India for more than a decade. This was my initial stage of professional training when I understood more about education and research and problems of both farmers and students. I discovered agriculture as a vast domain of biological sciences with its practical applications by the majority of population, *i.e.*, farmers mostly illiterate but intelligent inhabiting in rural areas. And these people, *i.e.*, farmers were kind hearted and produced food for both rural and urban people without any prejudices. But they faced tremendous difficulties with regard to technological know-how and its applications, availability of inputs and credits, post-harvest handling and marketing.

With half a century of my professional services and experiences abroad with the international organizations and interaction with countries of different regions, my observations in agriculture broadened and thoughts matured enabling me to understand both national and international problems, develop strategies and implement programmes and projects to mitigate problems faced by farmers and consumers by assisting the policy makers and development agencies. Some problems or issues were common to both developed and developing countries, some were common to developing countries and some were specific to nation. But by and large, most of the issues in production were faced by farmers, handling and marketing were faced by the traders and processing and consumption were faced by consumers.

At every stage both public and private sectors were necessarily involved in producing, distributing, marketing and consumption. In the end, if we examine closely, agriculture, food and human beings even though being dealt independently, are closely knit with unbreakable bondage among each other.

The P.N. Agricultural Science Foundation (PNASF) with the mission to promote agricultural education, research and development has taken up the mandate and the lead to disseminate the emerging agricultural knowledge among public and private sectors, farmers and consumers, professors and students, and people of both developing and developed countries. The PNASF and team firmly believe and propagate that Food, Agriculture and Humanity are the basics of human civilization and it needs to be viewed that way by each and all in order to get our adequate food and survive.

On the whole, the attempts will be made to give adequate treatment to the three Basics of Human Civilization, namely, Food, Agriculture and Humanity, in 5 volumes, namely I) Present Scenario, II) Food, III) Agriculture, IV) Humanity and V) Expectations.

Volume-II of this series of publication covered widely on Food and this volume-III will highlight the emerging issues of Agriculture.

The present volume-III has the contribution of 28 articles by 37 authors/co-authors invited nation and world-wide, to each of whom the PNASF is very grateful as they have gladly agreed to our request to extend voluntary contribution in the interest of the subject we are dealing with. The authors have drawn their own views based on their own findings and referred other authors, and the views of scientists, professionals and other specialists. The chapters in this volume include Introduction, Agriculture in Human Life, Contribution of Agricultural Technology, Improving Agriculture, Recent Developments, Urban and Peri-urban Agriculture, Women and Agriculture and Challenges and Opportunities.

We are highly grateful to the Technical Team and the Editorial Board consisting of Dr. C.P.A. Iyer, Dr. O.P. Dutta, Dr. K.R.M. Swamy, Dr. B.S. Prabhakar and Mr. P.B. Gaddagimath who made unflinching efforts to prepare and edit the book. All of this was not possible without the heavy support of the secretarial team led by Mrs. Vanita V. and Mrs. Divya C. who worked hard at the details of this publication.

We cannot forget the due contribution of our Senior Scientific Councillors and other Professors and Scientists who have kindly participated in brain storming sessions and have reviewed and provided their valuable comments on each paper received. Those senior scientists are Dr. S. Bisalaiah, Dr. R. Dwarakinath, Dr. G. K. Veeresh, Dr. M. Mahadevappa, Dr. P.G. Chengappa, Prof. R.S. Deshpande, Dr. C.P.A. Iyer, Dr. Elumalai Kannan, Dr. K.G. Ahuja, USA and Dr. Sundari Velayudhan, USA and PNASF extends grateful thanks to them.

On behalf of the PNASF, I extend my thanks to Scientific Publishers, Jodhpur, who readily agreed to make this joint publication in this beautiful form and presentation. Lastly, on behalf of the Board of Trustees, I express my gratitude to PNASF Senior Scientific Councillors, Technical Advisory Committee members and those individuals whose names are not mentioned, for their moral support and valuable contribution in the preparation of this book.



September 30, 2013

Prem Nath
Chairman, PNASF

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