

Chairman, PNASF Speaks



The paradigm of world's livelihood is built on the basic foundation of natural resources which includes humans, plants, animals, soils and minerals, water and air. But the very livelihood of these resources are at stake because they are strongly linked and depend on each other. And to add, the material resource viz., 'economy' has invaded the tranquil habitat, and life of the community of natural resources. Thus the present crisis is challenging livelihood of each of these natural resources whether it is human, plant or water or earth and the element of economy is interfering with the natural recourse of human depending on water and soil; and human, plant, animal together depending on soil, water and air. But when the livelihood of soil, water and air is at stake how human, plant and animal can survive? Hence the design of livelihood of world has the essential ingredients of livelihood of each natural resource.

We humans are selfish and concerned about our livelihood security only and try to over-exploit other natural resources, and have assumed ourselves as the master of all natural resources. Practically, there is war going on between and among natural resources. The world could be better, if each natural resource has its own right with prospects to safeguard its livelihood, and all resources together with better livelihood could offer the lively world.

We should underscore that none of the natural resources are in 'plenty' and that we should 'economize' on each natural resource to build together the world's livelihood. The food security of humans can not be attained without plants and plant security can not be achieved without soil and water, and it is impossible to keep secured soil and water without economics of management.

In short, the livelihood security of humans is entirely dependant on all other natural resources coupled with the material resource economy. It is incumbent on us to initiate appropriate steps from gross root to policy levels to make the world better.

Prem Nath
(Prem Nath)

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PNASF Releases the New Book- Horticulture and Livelihood Security

The PNASF organized the Release Ceremony of the new book, "Horticulture and Livelihood Security" prepared by PNASF, edited by Prem Nath and P.B. Gaddagimath and jointly published by Scientific Publishers (India), Jodhpur and PNASF, Bangalore on September 25, 2010 at Raj Bhawan, Bangalore. The function was graced by Dr. Hans Raj Bhardwaj, H.E. the Governor of Karnataka as the Chief Guest and Shri Basavaraj S. Bommai,



Dr. Prem Nath welcoming Dr. Hans Raj Bhardwaj, His Excellency the Governor of Karnataka

Minister for Medium and Major Irrigation, Government of Karnataka and Shri M.V. Rajasekharan, former Minister of State for Planning, Government of India, New Delhi as the Guests of Honor. Madam Prafulatha Bharadwaj, the First Lady also graced the occasion. More



The Book-Horticulture and Livelihood Security is being released by Dr. Hans Raj Bhardwaj

than one hundred lead scientists of agriculture/horticulture universities and research institutes and senior Government officials of Govt. of Karnataka participated in the release ceremony. Few of the special invitees were: Shri Krishna Rao, Principal Secretary, Raj Bhavan, Bangalore, Mr. Abhay Prakash, Former Additional Chief Secretary and Development Commissioner, Mr. G.V. Krishna Rau, Principal Secretary, Governors Secretariat, Dr. G. K. Veeresh, former Vice Chancellor, UAS, Dr. G.K. Vasanth Kumar, Additional Secretary (Food Processing), Bangalore, Dr. P.G. Chengappa, Former Vice Chancellor, Bangalore, Dr. S.B. Dandin, Vice Chancellor, University of Horticultural Sciences, Bagalkot, Dr. Amrik S. Sidhu, Director, IIHR, Bangalore, Dr. K. Narayana Gowda, Vice-Chancellor, UAS, Bangalore, Dr. K.P. Vasanth Shetty, Director, Indo-American Hybrid Seeds(India), Bangalore, Mr. V. K. Abraham, Director, Institute of Plantation & Horticulture Management, Bangalore, Dr. C.P.A. Iyer, former Director, CISH Lucknow, Bangalore, Dr. P. Parvatha Reddy, former Director, IIHR, Bangalore, Mr. Santosh Attavar, Indo-American Hybrid Seed Co., Bangalore, Dr. N. B. Gaddagimath, M/s Sarpan Agri Horticultural Research Centre, Dharwad, Dr. R.B. Gaddagimath, Gulbarga University, Dr. M. Seenappa, Dr. Rama Prasanna, UAS,

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Bangalore, Mr. Sadananda Shetty, Bangalore, Dr. B. Raju, Dean UHS, Bagalkot, Dr. M. Mahadevappa, former Vice-Chancellor, UAS(D), Dr. K. Santhanam and others.

Addressing the distinguished and elite gathering after release of the book, Dr. Hans Raj Bhardwaj appealed to horticultural and agricultural universities and research institutes involved in agriculture research to intensify their research in horticultural crops for higher yields and increased nutritional values. Even though India is producing fruits and vegetables, the production is far below to meet the requirements of the growing population. In the changing climatic conditions and changing dietary pattern of the people, efforts need to be made to popularise the advanced technologies in optimum utilisation of water, nutrients and high yielding cultivars, said Dr Bhardwaj and called upon the research workers to come out with viable and sustainable production technologies for small and marginal farmers and the peasants. He further appreciated the yeoman services of PNASF, Bangalore in the field of agriculture and allied sectors and wished all the successes in its future endeavours.



Dr. Hans Raj Bhardwaj H.E. the Governor of Karnataka addressing the gathering

In his key note address, Dr. Prem Nath spoke of the growing importance of horticulture in the present and future food and its developing linkage with the livelihood security of people particularly in rural areas.

Shri M.V. Rajasekharan spoke that one billion people around the world were suffering from hunger and malnutrition whereas, about 230 million were plagued by it in India and it was incumbent on us to take steps to overcome this calamity by augmenting food, nutrition and health security. Shri Basavaraj S. Bommai highlighted the role of horticulture in food and its contribution to employment generation and livelihood security and said that there is an urgent need of enhanced investment in the field of horticulture and related sectors by government and other stake holders and more so from the private sector.

On this occasion the PNASF silver medal and certificate award was presented by the Chief Guest, H.E. the Governor of Karnataka to the co-editor of the book, Mr. P.B. Gaddagimath and a certificate to the co-publisher of the book M/s Scientific Publishers (India), Jodhpur represented by Mrs. Shipra Sharma.

In the beginning Dr. O.P. Dutta welcomed the Chief Guest, the Guests of Honour and distinguished invitees. The ceremony was concluded with the vote of thanks by Dr. K.R.M. Swamy. Ms. Shyamla Nath, one of the trustees of PNASF who actively participated and



Audience during the book release ceremony

pioneered the minute-to-minute programme of the function was the Master of the Ceremony.

The Book-Release Ceremony was well covered by the electronic media viz., television and radio and leading newspapers from print media.

PNASF extends grateful thanks to TAC members namely, Dr. O.P. Dutta, Dr. K.R.M. Swamy, Mr. P.B. Gaddagimath and Dr. B.S. Prabhakar and the secretariat staff Ms. Vanita N. Shetty and collaborators for their dedicated efforts and contribution in preparing the book as well as in organizing this function successfully. The support extended by the Board of Trustees is praiseworthy. The trustee Ms. Shyamla Nath participated actively and pioneered the minute-to-minute programme of the function in the dedicated manner.

The moral strength from distance from PNASF/TAC members abroad and dedicated efforts on the ground by the Bangalore-based TAC members have demonstrated the contribution of PNASF in the form of valuable book and established the recognition of PNASF as the premier agricultural institution.

Exerts of Key Note Address by Chairman PNASF during the Book Release Ceremony

His Excellency the Governor of Karnataka, Dr. Hans Raj Bhardwaj Ji; The first Lady, Madam Shrimati Prafulata Bhardwaj Ji; Honorable Shri Basavaraj S. Bommai Ji, Minister for Major and Medium Irrigation and Water Resources, Government of Karnataka; Honorable Shri M. V. Rajasekharan Ji, Former Minister of State for Planning, Government of India, Shri Krishna Rao, Principal Secretary, Raj Bhavan, Bangalore; Dignitaries in the audience, Ladies and Gentlemen.



Dr. Prem Nath, Chairman, PNASF addressing the gathering

On behalf of the Dr. Prem Nath Agricultural Science Foundation, Bangalore, I consider it an honor and privilege to welcome you heartily to this event hosted at the Raj Bhavan with the blessings of His Excellency, the Governor of Karnataka.

Food remains the prime focus for the survival of human beings and its production is propelled by efficient farming for which the agricultural/horticultural science is the engine. At this time, among 6 billion people on earth, about one billion are still suffering from hunger and malnutrition across the globe and of which 642 million are in Asia and the Pacific Region with 230 millions homed in India. Thus addressing issues of livelihood security particularly food and nutrition security attains its priority among the major issues of food, clothing and shelter for human kind. Moreover, dealing with health issues becomes equally important in the wake of prevailing diseases and health disorders.

During the present millennium with the urge for quality life, and emerging availability of new and fresh produce and processed products, and change in food habits, horticulture is gaining importance as the second line of defence with the cereals and legumes on the front line of the food domain.

The area under horticultural crops, namely vegetables, fruits and medicinal and spice crops is increasing and the production of these crops has increased considerably, and its availability could be seen into the multiplicity of fresh and processed food chain stores opening across the country.

During the next decade the urban population surpasses the rural population and is expected to put high pressure on peri-urban and urban horticulture.

Horticulture assumes importance because of its significant contribution in food security and its major role in nutrition security. Experimental studies by the WHO has concluded that adequate consumption of vegetables and fruits prevents certain non-communicable diseases such as some cancer, blood pressure, diabetes, and above all growing obesity among young and old in many regions of the world. The FAO and the WHO have advocated adequate consumption of vegetables and fruits for good health. In addition, medicinal crops assume importance because of their medicinal values.

In order to understand and assess the growing importance of horticulture in food security, nutrition and health security and employment generation and its impact on economic growth, the first International Conference on Horticulture (ICH-2009) first ever held was organized by the Dr. Prem Nath Agricultural Science Foundation (PNASF) jointly with the Vegetable Science International Network (VEGINET) and the University of Agricultural Sciences, Bangalore, during November 9-12, 2009 in Bangalore. The Conference flagged and debated on relevant issues as mentioned above and identified challenges and opportunities in horticulture, listed out thrust areas, and made appropriate recommendations for the sustainability of horticulture sector in the present agricultural scenario and its role in providing livelihood security of the people and national economic growth.

The International Conference on Horticulture (ICH-2009) recognized that horticulture (a) provides strong support to food security, (b) is the major contributor to nutrition security, (c) secures health improvement, and (d) is important source of employment and income generation leading to economic growth and livelihood security.

In this spirit and in the wake of the present national and global call for eliminating hunger, malnutrition and health problems and securing employment and income generation, the Dr. Prem Nath Agricultural Science Foundation has endeavoured to invite the national and international lead authors to contribute to the new book entitled, "Horticulture and Livelihood Security" for the benefit of professionals, policymakers, farmers and the public.

This book on release consists of 39 articles authored by well-known international and national experts organized into 6 chapters and 552 pages viz. (I) Impact of Horticulture on Livelihood Security (II) Studies on Food, Nutrition and Health Security and Income Generation (III) Contribution of Horticulture Technology (IV) Delivery of Technology and Products (V) Government Policy and Development Programmes (VI) National and International Technical Cooperation. The editors of the book are Dr. Prem Nath and Mr. P.B. Gaddagimath.

I welcome and congratulate some of the author's present here- Dr. P. Parvatha Reddy, Dr. A.S. Sidhu, Dr. P.G. Chengappa, Dr. C. Aswath and myself. Other authors, from different parts of India and abroad have extended their best wishes on this occasion.

We are most thankful to the leaders- Dr. Hans Raj Bhardwaj Ji, Shri M.V. Rajasekharan Ji, Mr. Hiroyuki Konuma, Assistant Director General FAO, Dr. Mahmoud Solh Director General of International Centre for Agricultural Research in Dry Areas, Syria, and Prof. Jules Janick, (World-Known Professor of Horticulture, USA) for their encouragement and message of wisdom, which appear in the book.

In preparing the blueprint of this book, organizing the papers and editing them Mr. P.B. Gaddagimath has assisted me greatly with his expertise and experience, for which I am most thankful. Ms. Vanita N. Shetty of the PNASF spent long hours to prepare the whole manuscript in an excellent manner for which we are thankful to her.

It is expected that the present publication will enlighten the readers and disseminate the message in line with the title and theme of the book and subject.

Acknowledgement is due to the Scientific Publishers (India), Jodhpur for their best efforts in quality printing of this book in a timely manner.

Lastly, many thanks to those who have contributed in some form or other in the preparation of this book, but their name does not appear in this publication- special thanks to Dr. O.P. Dutta, Dr. K.R.M. Swamy and Dr. B.S. Prabhakar for their assistance.

Our Chief Guest, respected dignitaries on the dais, distinguished guests, Ladies and Gentlemen and Press Media, on behalf of the Dr. Prem Nath Agricultural Science Foundation and its collaborators, I thank you immensely for your kind support and active participation.

Jai Hind! Jai Karnataka!

PNASF attends UAS Alumni Global Meet 2010

On invitation of the organizers, Dr. Prem Nath attended the inaugural session of the UAS Alumni Global Meet 2010 held on December 25, 2010 at the Convention Center of the University of Agricultural Sciences Alumni Association, Hebbal Campus,. The event was organized by the Association under the leadership of Dr. G.K.

Veeresh with his strong team of former Vice-Chancellors and senior agricultural scientists.

The Chief Guest during the inaugural session was Dr. Hans Raj Bhardwaj, H.E. the Governor of Karnataka, while Dr. G.K. Veeresh, President of the Association and former Vice-Chancellor presided. The Guests of Honor were Dr. G. Parameswara, former Minister, Govt. of Karnataka; Dr. R. Dwarakinath, former Vice Chancellor, UAS; Dr. M.V. Rao, former Vice Chancellor, ANGRAU; and Dr. K. Narayana Gowda, Vice Chancellor, UAS, Bangalore.

In his keynote address Dr. G.K. Veeresh highlighted the progressive development of the Association and its activities whereas the Chief Guest, Dr. Hans Raj Bhardwaj, spoke on importance of agriculture and its role on food security where agricultural scientists and farmers played the key role. The Association recognized the outstanding contribution of Dr. R. Dwarakinath, an Alumni of 1949 student batch and former Vice-Chancellor of UAS, Bangalore and awarded him with the plaque and cash on this occasion. The Alumni from Karnataka and other states of India and abroad participated. While acknowledging the contribution of individuals and organizations, the Association acknowledged the cooperation and contribution of the Dr. P.N. Agricultural Science Foundation (PNASF), Bangalore to the UAS Alumni Association.

Chairman, PNASF Visits FAO Regional Office for Asia and the Pacific, Bangkok

On November 29, 2010 Dr, Prem Nath visited the FAO Regional Office for Asia and the Pacific in Bangkok and held discussion with the professional officials on issues of mutual interest.

Dr. Nath held meeting with Mr. Hiroyuki Konuma, Assistant Director General and Regional Representative and presented him with a complimentary copy of each of two books of Horticulture and Livelihood Security published by PNASF, Bangalore and Scientific Publishers, Jodhpur; and Foods and Nutrition published by PNASF and Studium Press, New Delhi. Mr. Konuma had written the message for the book-Horticulture and Livelihood Security. Mr. Konuma remarked the publications as valuable contribution to food and agriculture in the interest of educators, professionals and public at large.

Dr. Nath informed Mr. Konuma who showed interest in the upcoming Regional Symposium: "High Value Vegetables in Southeast Asia-Production, Supply and Demand", to be jointly organized by Department of Agriculture, Government of Thailand, AVRDC, ASEAN, and VEGINET scheduled on January 24-26, 2012 in Chiang Mai, Thailand. Dr. Prem Nath will represent VEGINET as its Chairperson and on behalf of VEGINET as one of the organizers to the symposium. Dr. Nath suggested that the FAO Regional experts on vegetable crops, IPM and rural and urban marketing could actively participate in the symposium.

Mr. Jan Ketelaar, IPM expert showed interest in the above symposium and agreed to make his presentation on IPM in vegetables. The FAO IPM Regional Programme has made valuable contribution in different vegetables in a number of Southeast Asian Countries. Mr. Ketelaar was a senior author to one of the articles

published in the book entitled-Horticulture and Livelihood Security. Dr. Nath presented him with an author's copy, which he appreciated.

PNASF Participates in ICSEP Seminar

On invitation by the organizers of the Seminar on "Development Challenges towards 21st Century India", organized by the Integrated Council for Socio-Economic Progress, Thrissur, Kerala, Dr. Prem Nath participated in the event held on October 31, 2010 at 4.p.m. at Hotel Citrine, Bangalore 560 020.

The Chief Guest of the function was Shri M.V. Rahasekharan, Honorable former Minister of State for Planning, Government of India, New Delhi and Dr. Prem Nath, Chairman, PNASF, Bangalore was the Guest of Honor. The speakers were Shri M.V. Rajasekharan (Bangalore), Dr. Prem Nath (Bangalore), Mr. Vijay Anand Sriram (Chennai), Mr. Ajit Mitra (Kolkatta) and Prof. J. Christopher Daniel, (Madurai).



Dr. Prem Nath addressing the gathering during ICSEP Seminar

The Chief Guest highlighted on moral and social values which are basic to the development and sustainability of our country. He highlighted on developmental issues and commented on the implementation of various national programmes and emphasized on realization of commitment by each citizen, young and elderly. Dr. Prem Nath highlighted on the global and national scenario of socio-economic situation and living conditions focusing on food and agriculture and natural resources coupled with migration of population from rural to urban areas. Mr. Sriram highlighted on values of human resources, whereas Mr. Mitra spoke on gaps in availability of technology and need for its application. Prof. Daniel stressed on social values, modern conceptualization and its application to community and nation.

The invitees came from different states of the country and received Mother Teresa Awards, awarded by the dignitaries on the dais. The awards were presented to 15 recipients for their excellent achievements in various



Dr. N.B. Gaddagimath receiving Mother Teresa Award

sectors including agriculture and hybrid vegetables. Dr. N.B.Gaddagimath, life member of VEGINET received the Mother Teresa Award. The event concluded with vote of thanks by Mr. Thomas Mathew, General Secretary on behalf of ICSEP.

Participation in UN-Day Celebration

The Association of Former United Nations Personnel in and of India (AFUNPI) organized the United Nations Day Celebration on October 24, 2010 at 11.30 a.m. at the Century Club, Bangalore. About 45 members of specialized agencies of the United Nations and their spouses available in Bangalore participated. The Chief Guest on the occasion was Mr. Natarajan Krishnan, former Ambassador and Permanent Representative of India to the United Nations in New York. The meeting was presided over by Dr. S. Janakiram, President, AFUNPI and was conducted by Mr. K. Natarajan, Secretary, AFUNPI.

Dr. Prem Nath introduced the Chief Guest and invited him to speak on the occasion, Mr. Krishnan shared his experiences of about 20 years with the UN and expressed his views on working of the UN system and its working relation with member countries, formation and functioning of the Security Council and the target and achievement of Millennium Development Goals.

Dr. Prem Nath, former Assistant Director General of FAO, shared his experiences working with the UN and member countries and highlighted the contributions made by FAO in food and agriculture sector. He cited the example of Nigeria where wild fruits and vegetables like guava, mango, okra and others were improved into cultivated varieties, the desert of southern Saudi Arabia with no history of cropping was converted into bloom by conveying rain water from neighbouring country and by cropping. The regional and global projects transferred successfully the low-cost farm equipment, plant materials and technology from one participating country to other for their benefit in agriculture. These were not possible without UN assistance.

Dr. R. Dwarakinath with his long experience with the university system, spoke of land, farmers and poverty alleviation in the Indian context.

Dr. Janakiram read the following message received from the UN Secretary-General, Mr. Ban Ki-moon as follows;

- Sixty-five years ago on this date, the founding Charter of the United Nations entered into force. Every year on UN Day, we reaffirm our global mission. We reassert the universal values of tolerance, mutual respect and human dignity. And we recognize the progress we have made together: gains in literacy and life expectancy and the spread of knowledge and technology advances in democracy and the rule of law.
- Despite our problems, despite polarization and distrust, our interconnected world has opened up vast new possibilities for common progress. Let us commit to do even more to realize the great vision set out in the UN Charter.

The members contributed to the ongoing initiative, Akshay Patra Project for the benefit of children.

PNASF Participates in First World Noni Congress

On invitation by the organizers, Dr. Prem Nath participated in the first World Noni Congress-2010 with the theme *-Noni for Global Wellness*, organized by the World Noni Research Foundation, Chennai and held during October 01-03, 2010 at Trade Centre, Chennai. The Congress was attended by over than one thousand participants from research, development, trade and consumers from different parts of India and some other countries.

The congress was inaugurated by Prof. M.S. Swaminathan, Member of Parliament and was presided by H.E. Lt. Gen. (Retd.) Bhupinder Singh, the Lt. Governor, Andaman and Nicobar Islands. Dr. Kirti Singh, Chairperson, World Noni Research Foundation delivered introductory address. The Chief Guest of the Plenary and Valedictory Function was Prof. K.V. Thomas, Minister of State for Agriculture, Government of India, New Delhi.

During the Technical Sessions, Dr. Prem Nath chaired the session on Crop Improvement and also chaired the Special Lecture-03 delivered by Dr. H.P. Singh, Deputy Director General, ICAR, New Delhi. Dr. Nath served as the Panelist on the Technical Session-XII. International Cooperation on Noni Research and Development. Dr. Nath also wrote 'Message' for the Souvenir which was released during the inaugural session of the congress.

It is commendable that all papers presented were published as Proceedings of the Congress at the end of the function.

PNASF Participates in 44th Convocation, University of Agricultural Sciences (UAS), Bangalore

On invitation, the PNASF was represented by Dr. Prem Nath to the 44th convocation of the University of Agricultural Sciences (UAS), GKVK, Bangalore on September 25, 2010. The event was inaugurated by H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj and the Chief Guest was Dr. S. Ayyappan, Director General, Indian Council of Agricultural Research (ICAR). While delivering the welcome speech and report, Dr. K. Narayana Gowda Vice-Chancellor highlighted various achievements of the University in education, research and extension and reported the effective collaboration between UAS and PNASF in organizing the International Conference on Horticulture (ICH-2009) during November 9-12, 2009 at Bangalore. This was further highlighted by photo of the ICH-2009 which appeared on the back cover-page of the convocation brochure. Earlier Prof. D.P. Kumar received PNASF/ICH Silver Medal Award for outstanding contribution in Horticultural Science.

Among hundreds of students who received degrees, gold medals were awarded to outstanding ones. The PNASF Gold Medal awarded annually to the student with highest grade point average in agriculture was presented this year to Mr. Shashikant G. Rayar.

PNASF Invited to Special Lecture

On invitation by the MVR Foundation, Bangalore, Dr. Prem Nath attended the Special Lecture by Dr. M.S. Ahluwalia, Deputy Chairman, Planning Commission, Government of India on September 19, 2010 during the 83rd birthday celebration of Honorable Shri M.V. Rajasekharan, former Union Minister of State for Planning, Government of India at Bharatiya Vidya Bhavan, Bangalore.

Dr. Ahluwalia explained vividly the challenges of the 12th National Plan for understanding of civic society. He emphasized that the upcoming plan will be inclusive of the future and challenges foreseen in various sectors leading to overall national growth. He pointed out that agriculture sector should lay more emphasis on improving productivity per unit area rather than on maintaining and increasing the agricultural area.

While presiding over, Justice M.N. Venkatachalaiah, former Chief Justice of Supreme Court of India, indicated that in the last century USA had more than 60% people engaged in agriculture as compared to present scenario with about less than 3 percent people engaged in agriculture, and leading agriculture production in the world.

Shri M.V. Rajasekharan, extended his message to the government and civic societies to reach to the people and make them aware of the upcoming challenges and they all should work in partnership on different issues facing the nation. Gandhian at heart and highly learned person, Shri Rajasekharan ji has appreciated food and nutrition and women development programmes of the PNASF and has supported its activities.



Shri M.V. Rajasekharan, former Minister of State for Planning, Government of India, delivering his message

Director, Indian Institute of Horticultural Research (IIHR) Visits PNASF

On invitation by the Chairman, PNASF, Dr. A.S. Sidhu, Director of the Indian Institute of Horticultural Research (IIHR), Hessaraghatta visited the PNASF on September 18, 2010 and discussed the issues of mutual interest in the area of horticulture.

Dr. Prem Nath welcomed Dr. Sidhu and invited him to the PNASF Book-Release Ceremony scheduled on September 25, 2010 at Raj Bhawan. Dr. Sidhu gladly accepted the invitation.

Dr. Nath expressed that serious problems of growers particularly of cash vegetable crops should attract attention of the scientists in solving it and in rescuing the failing commercial crop as far as possible. The benefit should be derived out of the organized periodical dialogues/meetings between extension and scientific staff. Dr. Sidhu concurred with it.

Both the scientists agreed that the large scale multiplication and distribution of improved seeds and plants was the demand of the present time. Dr. Sidhu explained the IIHR programme initiated.

Dr. Nath explained about the PNASF Gold Medal instituted at the IIHR during 2002 awarded periodically to the outstanding scientists of the IIHR. The last such award was to given to Dr. T. Janaki Ram during the International Conference on Horticulture (ICH-2009) held November 9, 2009. This year PNASF Travel Grant was granted to the young scientist of IIHR, Dr. H.P. Sumangala to present the paper during IHC-2010 organized by the ISHS in Lisbon, Portugal on August 22-27, 2010.

Dr. Sidhu was informed about the upcoming Regional Symposium-High Value Vegetables in South East Asia: Supply and Demand scheduled January 24-26, 2012 in Chiang Mai, Thailand organized by Thailand Horticultural Research Institute, AVRDC-The World Vegetable Center, ASEAN-AVRDC Regional Network (AARNET) and Vegetable Science International Network (VEGINET).

PNASF Participates in National Seminar on Organic Terrace Gardening

On invitation by the organizers of the National Seminar on Organic Terrace Gardening held on September 9 and September 10, 2010 at the UAS Alumni Association Building, Veterinary College Campus, Bellary Road, Hebbal, Bangalore, the PNASF was represented by Dr. K.R.M. Swamy, Dr. B.S. Prabhakar and Dr. Prem Nath. The seminar was organized by AME Foundation, Association for Promotion of Organic Farming (APOF), UAS Alumni and Indian Institute of Horticultural Research, Bangalore. About 250 participants from Karnataka and other states participated. Several papers were presented at the Symposium.

The Symposium was inaugurated by Dr. S.B. Dandin, Vice Chancellor, University of Horticultural Sciences, Bagalkot and was presided over by Dr. R. Dwarakinath, Chairman, AME Foundation with Dr. G.K. Veeresh, President, APOF and Dr. K. Narayana Gowda, Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore as special guests on dais.

The PNASF sponsored the symposium financially and by participation and the PNASF profile appeared in the Souvenir published and released during the Symposium. The organizers acknowledged the financial support and appreciated the contribution and activities of PNASF and honored Dr. Prem Nath.

PNASF participates in ASHS Annual Conference 2010

The annual conference of American Society of Horticultural Science (ASHS-2010) was held from August 2 to 5, 2010 at Palm Desert, California, USA. Hundreds of participants from USA and other countries attended. About, more than 800 oral and poster papers were presented on all horticultural crops. Most of the papers presented covered the research and development work done in the United States and some related to international projects.

The PNASF was represented by Dr. Prem Nath and Dr. Sundari Velu. Dr. Usha R. Palaniswami, New York, represented VEGINET as an Executive Member and US Focal point. The activities of participation focused on (a) presentation of the paper, (b) attendance in the Memorial Lectures, (c) participation in Working Groups (d) welcome lunch and dinner, and (e) individual consultations.



Dr. Nath and made the oral presentation on International Dr. Sundari Velu with Dr. Prem Nath

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Conference on Horticulture (ICH-2009). The paper was presented during the Oral Session 10: International Horticulture. It was one of some selected sessions which was televised. As a part of the ASHS Hort Talks Initiative, this paper was selected for recording during the presentation at the conference. The pod-cast recording of the presentation was part of an effort to expand the digital resources available to ASHS members, educators, industry and the public. The paper is also available at <http://ashs.org/db/horttalks>. The published abstract of the above paper is reproduced below.

International Conference on Horticulture at ASHS Conference: (ICH-2009)

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'The International Conference on Horticulture (ICH-2009) with the theme Horticulture for Livelihood Security and Economic Growth was held in Bangalore, Karnataka State, India, 9–12 Nov. 2009. It was organized by Dr. Prem Nath Agricultural Science Foundation (PNASF), Bangalore in association with Vegetable Science International Network (VEGINET), Bangalore and Univ. of Agricultural Sciences (UAS), Bangalore in collaboration with other national and international organizations. The objective of the conference was to develop a plan to guide the development of cost-effective and efficient horticultural interventions to generate additional employment and income opportunities, crop diversifications through increased production and consumption of horticultural crops, provide better food and nutritional security, and improve health status by prevention of non-communicable diseases and micronutrient deficient disorders, all leading to livelihood security of farmers, particularly small and marginal ones, and overall economic growth in the interest of both producers and consumers. About 750 delegates from 40 countries including Asia and the Pacific, Africa, Central Asia, Europe, Middle East and United States participated in the deliberations of the conference. There were 17 technical sessions including a seminar, covering six theme areas viz; Technological Domain; Institutional and Policy Support: Socio Economic Domains; Producer – Consumer Domain; Technical Cooperation among Developing Countries (TCDC); Challenges and Opportunities in Horticulture - Seminar; Plenary Session: Opportunities and Future Thrusts. A total of 650 presentations, including 35 lead lectures, 250 oral, and 365 poster presentations were given. The Conference recognized horticulture as the second line of defense, with cereals and legumes serving as the first line in the food domain. It was estimated and stated that horticulture 1) significantly supports food security, 2) is the major contributor to nutrition security, 3) promotes good health, and 4) is a source of employment generation—all leading to livelihood security and further economic growth. The recommendations will be presented during the lecture.'

The PNASF participants also attended (a) the B.Y. Morrison Memorial Lecture entitled "Developing Strategies for Sustainable Production in a Changing Global Climate Scenario" By Dr. Jiwan Palta, University of Wisconsin, Madison, and (b) President Address entitled "An Interactive Look of who we are and how History Speaks

to us Today" by Dr. William J. Lamont, Jr., ASHS President 2009-10. Both the lectures were stimulating and interesting in the interest of horticultural scientists.



Presidential address during ASHS 2010 Annual Conference

Dr. Nath and Dr. Velu had an opportunity to participate in the breakfast discussion group on International Opportunities and Interests. The growing interest on international horticulture among the participants was noted. It was informed that the U.S. Government initiative was already on to attract horticulture projects in selected countries.

Dr. Nath and Dr. Velu attended the Workshop on Partnership in Education and Practice: Curriculum Development and Transfer Technology. In her presentation during the conference Dr. Usha Palaniswami (New York) highlighted the studies she made during her visit to PNASF and ICRISAT in India and made interesting future projections to make the learning objects and activities available across the nations. In the same workshop Dr. Bhimanagowda S. Patil (Texas A and M) focused on bilateral technical cooperation between USA and India with the lessons learnt in the past and the future projections possible.

It was interesting to learn that the ASHS had recognized the Association of Horticulturists of Indian Origin (AHIO) and the AHIO was active in promoting horticultural research and education in USA and India, and they had periodical discussion on identifying and developing the area of effective collaboration. Dr. Prem Nath was invited to this meeting and he expressed that the earlier technical collaboration during nineteen sixties between the universities in



ASHS 2010 Annual Conference and AHIO participants with Dr. Prem Nath

USA and India were useful and effective where professors were exchanged. He further encouraged the participants to assist horticulturists in India and in other Asian Countries who need assistance. Dr. Usha R. Palaniswamy who participated actively in International Conference on Horticulture (ICH-2009) expressed her appreciation for PNASF in organizing successfully and bringing together national and international participants numbering over 700 on a common platform. The participants expressed appreciation of efforts made by PNASF, Bangalore and MSSF, Chennai in agriculture/horticulture. The participants thanked the PNASF for successfully organizing the ICH-2009 in Bangalore as well as to present the recommendation to ASHS 2010. Dr. Nath made available copies of PNASF News and CD's of the Proceedings of ICH-2009 to selected participants including President of ASHS, Dr. William J. Lamont.

While attending the welcome lunch and dinner the PNASF nominees had opportunity to react with individual scientists from different states in USA and other countries which would enhance PNASF linkage to international horticulture.

Participation in the National Vegetable Research Meeting, Bangkok, Thailand

On invitation by the Horticulture Research Institute, Ministry of Agriculture, Government of Thailand, Dr. Prem Nath participated as the Chief Guest in the Annual National Meeting of the Vegetable Researchers held at the institute in Bangkok on June 29, 2010. The guest learnt about the recent research activities in the country and was invited to express his views on priorities and trend of vegetable research in the present national and global demand. It was encouraging to note that Thailand has made tremendous progress and development of quality production of vegetables and fruits and in meeting domestic and export market demand. Other guests to the meeting were Dr. Robert Holmer, Director, Southeast Asia Region, AVRDC-The World Vegetable Center, Taiwan and Dr. Narinder Dhillon of AVRDC. Dr. Grisana Linwattana, Senior Research Scientist, Horticulture Research Center, Bangkok, presided the meeting and expressed his thanks to the guests. About 30 researchers participated.

PNASF Submits ICH-2009 Recommendations to Governor of Karnataka

On May 26, 2010, on behalf of Dr. P.N. Agricultural Science Foundation (PNASF) Dr. Prem Nath made a courtesy call upon H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj at Raj Bhawan, Bangalore. Dr. Nath appraised Dr. Bhardwaj ji of the PNASF activities and future plans.



H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj ji receiving ICH-2009 Proceedings and Recommendations presented by Dr. Prem Nath

On behalf of the PNASF and Organizing Committee of the International

Conference on Horticulture (ICH-2009) held on November 9-12, 2009, Dr. Nath presented the Proceedings and Recommendations to H.E. the Governor who was pleased to receive it. He kindly agreed to convey it to the Government of Karnataka for its consideration and implementation.

Dr. Nath informed H.E. of the new book on Horticulture and Livelihood Security prepared by the PNASF and to be published soon. He further requested H.E. to kindly release the book during a book-release ceremony proposed and H.E. pleasantly agreed.

H.E. was kind enough to encourage the PNASF to continue with its efforts to augment the knowledge on horticulture, food and nutrition security and livelihood among the scientific community and public at large.

PNASF attends National Conference on "Horticulture Bio-diversity for Livelihood, Economic Development and Health Care"

On invitation by the organizers, Dr. Prem Nath attended the inaugural session of the "National Conference on Horticulture Biodiversity for Livelihood, Economic Development and Health Care" organized by the University of Horticultural Sciences (UHS), Bagalkot and Lt. Amit Singh Memorial Foundation, New Delhi at the UHS Campus, Bangalore on May 29, 2010. The Chief Guest was H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj. Among others Dr. S. Ayyappan, Director General, ICAR, Dr. S.B. Dandin, Vice-Chancellor, University of Horticultural Sciences, Bagalkot and Dr. H.P. Singh, Deputy Director General (Horti.), ICAR addressed the gathering of over 500 participants.

The conference covered various technical sessions on issues of horticultural biodiversity and several technical papers were presented by the scientists from different institutes and universities. The exhibition covered various aspects of horticulture, which was useful for the participants and visitors.

Participation in Indian Seed Congress

On invitation, the PNASF was represented by Dr. Prem Nath to inaugural session of the Indian Seed Congress 2010 organized by the National Seed Association of India during February 12-13, 2010 at Hotel Lalit Ashok, Bangalore. About 500 delegates from seed industry of India and abroad participated. The exhibition organized on this occasion was informative, educational and useful for the stakeholders.

Participation in 38th Group Meeting of All India Coordinated Vegetable Improvement Project

On invitation, Dr. Prem Nath attended the inaugural session of 38th Group meeting of the All India Coordinated Vegetable Improvement Project organized by the ICAR at the Indian Institute of Horticultural Research (IIHR), Hesaraghatta, Bangalore on January 16, 2010. The function was inaugurated by the Chief Guest, H.E. the Governor of Karnataka Dr. Hans Raj Bhardwaj and presided over by the ICAR Deputy Director General (Horticulture), Dr. H.P. Singh. About 250 participants from different universities and horticultural research



Dr. H.P. Singh felicitating Dr. Prem Nath during the 38th Group meeting of the All India Coordinated Vegetable Improvement Project

institutes in India participated. In his address, Dr. Singh spoke of the progress made on vegetable crops improvement coordinated project and of the future expectations.

On this occasion, the organizers honored the selected dignitaries with the life-long achievement award for their outstanding contribution in vegetables. Among others, Dr. Prem Nath and Dr. O.P. Dutta were presented with this award. Dr. Nath remembers to have organized such meeting during the early days of All India Coordinated Project on Vegetables in early 1970's at University of Agricultural Sciences (UAS), Bangalore and Dr. Vishnu Swarup was the Coordinator and the new IIHR was being established at that time.



Felicitating Dr. O.P. Dutta

Visitors to the PNASF

VIP Visits PNASF

On invitation by the Board of Trustees, Shri M.V. Rajasekharan, former Minister of State for Planning, Government of India, visited PNASF on February 01, 2010.

Shri Rajasekharan Ji expressed high satisfaction and appreciation on the organization and achievement of the International Conference on Horticulture (ICH-2009) held during November 9-12, 2009 of

which he was the Guest of Honor. He encouraged the PNASF members to continue with the efforts on disseminating message on overcoming food and nutrition security and thereby improving livelihood security of the people.

The honorable visitor was presented with all ICH documents published during the conference and with memento, which he appreciated.

Deputy FAO Representative Visits PNASF

On February 16, 2010, Mr. Lakshman Kumar Guatam, Assistant FAO Representative (Programme), Lalitpur, Nepal visited PNASF and had detailed meeting with Dr. Prem Nath to whom he knew since 1970 when he was posted at FAO, Rome. Mr. Gautam briefed Dr. Nath on agricultural development in Nepal and highlighted the priority areas of Nepal Agriculture. The two identified the area of future collaboration. The PNASF extended its willingness of possible technical support in terms of expertise.

ICAR Official Visits PNASF

On April 3, 2010 Dr. H.P. Singh, Deputy Director General (Horti.) of Indian Council of Agricultural Research, New Delhi visited PNASF and held detailed discussion with Dr. Prem Nath on different dimensions of Horticulture in India. Dr. Singh detailed various programmes and projects he had initiated and implemented in the interest of horticultural research and development in the country. He also identified the grey areas and future plan to overcome those. He talked of thrust areas and opportunities in horticulture. Dr. Nath expressed PNASF's support in augmenting horticulture research and development in India.



Dr. H.P. Singh, DDG (Hort.), ICAR

It is recorded that the ICAR had contributed a sum of Rs. 2,00,000/- (Rupees Two Lakhs Only) to support the International Conference on Horticulture (ICH-2009) held during November 9-12, 2010 organized by Dr. P. N. Agricultural Science Foundation (PNASF), Bangalore along with the Vegetable Science International Network (VEGINET), Bangalore and University of Agricultural Sciences (UAS), Bangalore.

Dr. Singh invited PNASF to participate in the upcoming National Conference on Horticulture Biodiversity for Livelihood, Economic Development and Health Care in Bangalore on May 29, 2010.

Former Vice Chancellor of KAU and Director, IIHR visit PNASF

Prof. K.V. Peter, former Vice Chancellor of Kerala Agricultural University and an eminent vegetable specialist and Dr. A.S. Sidhu, Director of Indian Institute of Horticultural Research (IIHR), Hesaraghatta Bangalore visited PNASF on January 19, 2010 and held discussion with Dr. Prem Nath on mutual issues facing horticulture and vegetables in particular. The importance of research leadership and identification of growers' problems and preparing and implementing projects to solve such problems of economic importance, should receive priority attention.

PNASF/SUN/WD-SHG/2005: Promotion of Rural Women Self Help Group through Dairy Development Project

Promotion of rural women self help group through dairy development project

The project was launched on March 30, 2007 at I.D.Halli, Tumkur District. A total of 10 beneficiaries were provided each with one milching cow and a calf for their livelihood security. Recent visit by the coordinator during August 2010, revealed the following facts;

Out of 10 beneficiaries, three beneficiaries were having each, a healthy mother cow and two female calves. The milk yield varies from 8 to 9 liters / day/beneficiary. Two beneficiaries were having each a mother cow and a female calf. The milk yield varied from 2.5 to 4 liters/day/beneficiary. Two beneficiaries were having each a mother cow and two to three male calves which have been either sold at the rate of 2000/calf, or they are dead. In case of one beneficiary, the mother cow is dead, however the female calf is 3.5 years old and has been inseminated. One beneficiary has sold the mother cow since it was sick and now negotiating to purchase another cow to replace it. One beneficiary has replaced the cow with a buffalo. The milk is being sold to the co-operative society at the rate of Rs.12/litre.

Almost all the beneficiaries were giving the concentrate along with the fresh feed to the cow and calves. Overall sanitary conditions were hygienic. The compost was being used on their own farms, the annual yield was 4-5 tractor loads.

As a part of gender sensitization and empowerment of women, it was decided to form a Self-Help Group (SHG) involving the beneficiaries. The PNASF will assist in drafting and finalizing the Memorandum of Understanding between SHG and PNASF towards the sustainability of the SHG.

PNASF/MHPS/DES/2008-09/Biological Science and Nutrition Project

Under the above project, a pilot study was carried out by the PNASF, Bangalore to study the impact of nutrition gardening, education and game on the nutrition knowledge and preferences for fruits and vegetables of the school children. It is expected that through school children their parents will also be motivated to grow horticultural crops in the available interspaces that in turn helps to provide nutrition security as well as income security in the households. It is proposed to encourage students' parents, especially women, to participate in lecture cum demonstration programmes to ensure finally that it will be a sustainable community activity in the neighborhood of the school and adjoining areas.

The study was taken up at Model Higher Primary School, Geddalahalli, Bangalore (Govt. school) and Daffodils School (Private school), Sanjaynagar in Bangalore to promote nutrition awareness and gardening among school children. The innovativeness of the project was in its modus operandi, wherein "learning - by doing"

that motivates students to learn the life cycle of plants and nutritional aspects of vegetables and fruits. The uniqueness of the project was its multiplier effect through "student – parent – neighborhood community" network and through "teacher – teacher – student" network.

In the first phase of study about one hundred students were given the task of experimenting with plants. They grew different vegetables in pots and other containers placed on the terrace of the school. There were six sets of respondents, students, parents and teachers involved in the experiments and the other set from the same school but not involved in the experiment. A pre-project test was conducted to assess the knowledge level of the six groups and the test was repeated after two crop cycles. The results indicated initial improvement in the knowledge level in the students involved in the experiment, while the other five groups did not show any marked change in knowledge or commitment to the cause. The results of this pilot project have been analyzed critically to suggest the modifications to make the programme more effective and to bring in perceptible improvement in awareness and implementation of the activities aimed to better the nutritional status of the target

The study conducted for three years from 2005, included six (6) sets, of students, parents and teachers who participated in the experiments and another control set. The level of nutrition knowledge has significantly improved among the students who have participated in the experiment, but that of teachers, parents and others from the control group did not show any marked improvement. Therefore, under the guidance of Mrs. Jamuna K.V., Assistant Professor, Bakery Training Unit, University of Agriculture Sciences, Bangalore with PNASF Coordinator, Dr. B.S. Prabhakar, an experiment was taken up by the PNASF M.Sc. Scholar, Ms. Shalmali Naik to study the impact of feeding school children with bakery and other traditional snacks that contain 5 % of shepu (*Pencedanum graveolens* L.) leaves. to correct Fe-deficiency. Government Higher Secondary School, Ganganagar, Bangalore was selected for the study during 2009 -10.

These studies have indicated that the health and nutritional status of school children was inadequate, especially with anthropometric measurements, nutrient intake and haemoglobin level.

Incorporation of 5% Shepu leaves in the bakery product (Rusk) was acceptable to the school children. They were grouped according to the hemoglobin level in the age group of 13 years. Girls were found to be more anemic compared to the boys of same age group. Consumption of greens was hardly once in a week in the families of experimental group. Feeding the product (Rusk) that contained 5% of Shepu leaves for 90 days improved the haemoglobin level (11-8 %), whereas control group had not much change in the haemoglobin level.

Shepu leaves are available round the year and it is an inexpensive source of Fe that can be easily impregnated into the snacks that are relished by the children. Further studies will be undertaken by the project with another set of students in a new school.

INTERNATIONAL CO-OPERATION/SOCIAL COMMITMENT

INTERNATIONAL CO-OPERATION

Forthcoming Regional Symposium on Vegetables, Thailand

First Meeting

On invitation by the executive member of VEGINET and member of AARNET, Dr. Grisana Linwattana, Dr. Prem Nath participated in the consultative meeting of ASEAN-AVRDC-Research Network (AARNET) on proposed Regional Symposium on Vegetables in Southeast Asia, held during working lunch on June 29, 2010 at the Horticulture Research Institute, Bangkok. Dr. Grisana Linwattana and Dr. Robert Holmer briefed the meeting about the proposed symposium and invited VEGINET to participate in it. The Symposium was being organized by the Department of Agriculture, Thailand, AVRDC, Taiwan, and ASEAN. Dr. Linwattana and Dr. Holmer invited VEGINET to be the active partner in organizing the Symposium.

It was suggested that the Symposium be held (a) during first week of December, 2011, (b) in Chiang Mai, Bangkok, (c) appropriate theme and title be prepared (d) VEGINET be one of the organizers, and (e) DOA, Bangkok will draft a proposal for discussion.

Dr. Nath informed that on receipt of draft proposal it will be circulated among the executive members of VEGINET asking their views and comments and conveyed to the organizers. The organizers also proposed the possibility of their visit to Bangalore to facilitate discussion with the VEGINET.

The meeting was attended by Dr. Grisana Linwattana, Dr. Robert Holmer, Dr. Narinder Dhillon, Dr. Prem Nath and two other members of AARNET.



Members of the Department of Agriculture, Thailand, AVRDC and VEGINET with Dr. Prem Nath

Second Meeting

After the first meeting held on June 29, 2010, the second meeting was held on August 9, 2010 at the working dinner of the Horticulture Research Institute, Bangkok. About 13 members of the Department of Agriculture, Thailand, AVRDC and VEGINET including Dr. Grisana Linwattana, Dr. Robert Holmer, Dr. Prem Nath, Dr. Peyanoot Naka, Dr. Amnuai Adthalungrong and other scientists participated

The members present noted that there has been active correspondence among the organizing partners between the period of two meetings. It needed reconsideration of the dates, title and theme, technical and administrative meetings and contact with donors. It was concluded that (a) the Symposium date be postponed to January 2012, (b) venue of Chiang Mai remaining the same, (c) new title be proposed, (d) the administrative action/meeting with ASEAN should proceed, (e) the date of technical consultation with VEGINET in Bangalore be postponed, and (f) the Government of Taiwan be approached for assistance.

Since the executive members of the VEGINET had expressed their appreciation and support to this event, Chairperson agreed to extend its full technical support to the regional Symposium.

SOCIAL COMMITMENT

AWARDS

PNASF Medal/Certificate to Editor/Publisher

During the Book-Release Ceremony on Horticulture and Livelihood Security at Raj Bhawan on September 25, 2010, the co-editor Mr. P.B. Gaddagimath, Information and Publication Officer at the Indian Institute of Horticultural Research (IIHR), Bangalore, received the PNASF Silver Medal for his outstanding work by H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj.

On this occasion M/S Scientific Publishers, Jodhpur represented by Mrs. Shipra Sharma received the PNASF certificate of merit by the H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj.



PNASF Silver Medal and Certificate Award to Mr. P.B. Gaddagimath

SOCIAL COMMITMENT



PNASF Certificate to M/s Scientific Publishers, Jodhpur represented by Mrs. Shipra Sharma receiving on behalf of M/s Scientific Publishers, Jodhpur

GOLD MEDAL PNASF/UAS/2001

The PNASF Gold Medal 2009 was awarded to the Ph. D student Mr. Shashikant G. Rayar, for highest grade point average at the University of Agricultural Sciences, Bangalore. The award was presented during the University's 44th Convocation at GKVK Campus, Bangalore held on September 25, 2010.

PNASF/DHARMSHEELA NATH SCHOLARSHIP/2006

On the recommendation of the University of Agricultural Sciences (UAS), Bangalore, Ms. Shalmali Naik, a student of Junior M. Sc. (Agri.) at UAS was awarded the PNASF/Dharmasheel Nath Scholarship for the academic year 2009-10 and to assist the Project PNASF/MHPS/2005- Biological Science and Nutrition Project for school children.

PNASF/AHUJA/FELLOWSHIP/2001

On the recommendation of the University of Agricultural Sciences (UAS), Bangalore, Ms. Prema G., a student of Junior M. Sc. (Horti) at UAS was awarded the PNASF/Devki Devi Ahuja fellowship for the academic year 2009-10 to undertake research work towards M. Sc. thesis in Horticulture.

PNASF/SPONSORSHIP-2010

PNASF Sponsored the National Seminar on Organic Terrace Gardening organized by the AME Foundation, APOF, UAS Alumni and IIHR, Bangalore held on September 9-10, 2010 at Hebbal, Bangalore.

PNASF International Travel Grant to Young Scientist of IIHR, Bangalore

Within the mandate of PNASF to assist and encourage young scientists to participate in international conferences, the first award was granted to Dr. H.P. Sumangala of the Indian Institute of Horticultural Research (IIHR) to present the paper entitled "*Horticulture of the Taj Mahal: Gardens of the Imagination*" as a co-author with Prof. Jules Janick, Purdue University, USA during the International Horticulture Congress (IHC-2010) organized by the International Society for Horticultural Science in Lisbon, Portugal on August 22-27, 2010. The abstract of the paper is mentioned below;

S09.030 Horticulture of the Taj Mahal: Gardens of the Imagination

Janik, J.1; Kamenetsky, R.2 ; Puttaswamy, S. H.3; Sumangala, H.3

- 1 Department of Horticulture and Landscape Architecture, Purdue University, United States
- 2 Department of Ornamental Horticulture, Agricultural Research Organization, the Volcani Center
- 3 Indian Institute of Horticultural Research, Hessaraghatta, 560089, Bangalore, India

The 17th century mausoleum in Agra, India, known as the Taj Mahal, has been long considered one of the most, if not the most, beautiful building, in the world. The structure is part of a large complex of buildings and gardens encompassing 1.7 hectares. Although usually considered in terms of its architecture, the building and grounds are rich in horticulture. The gardens in the Persian style, although considerably altered from the original, are justly famous. The external and internal walls are richly ornamented with bas reliefs of plants and decorations of stone inlays rich in floral imagery that combine Persian, Western, and Indian influences. The architecture garden, and decoration so the Taj Mahal are considered the pinnacle of Indo-Mughal art.

PNASF Felicitates Newly Wed Couples of its Family

In its continued efforts to augment social being among the PNASF members, a get-together dinner was organized at the Hotel Lalit Ashok, Bangalore on January 23, 2010 at 7.30 p.m. The occasion was to welcome two newly wed couples of the PNASF families. Mr. Vaibhav and Mrs. Samridhi, son and daughter -in-law of Mrs. and Dr. O.P. Dutta; Mrs. Richika and Mr. Shashank, daughter and Son-in-law of Mrs. and Mr. Vinod K. Huria. Both the couples were congratulated and felicitated and elderly members blessed the couples. About 25 members attended the function.



Congratulating Mr. Vaibhav and Mrs. Samridhi



Congratulating Mrs. Richika and Mr. Shashank



PNASF family at the get-together

INFORMATION DISSEMINATION

Book Release

A new book entitled "Horticulture and Livelihood Security" authored by lead national and international authors in line with the title and theme of the book and edited by Dr. Prem Nath and Mr. P.B. Gaddagimath; was published by PNASF, Bangalore and Scientific Publishers, Jodhpur and was released by the Chief Guest, H.E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj during Book Release Ceremony held on Saturday September 25, 2010.

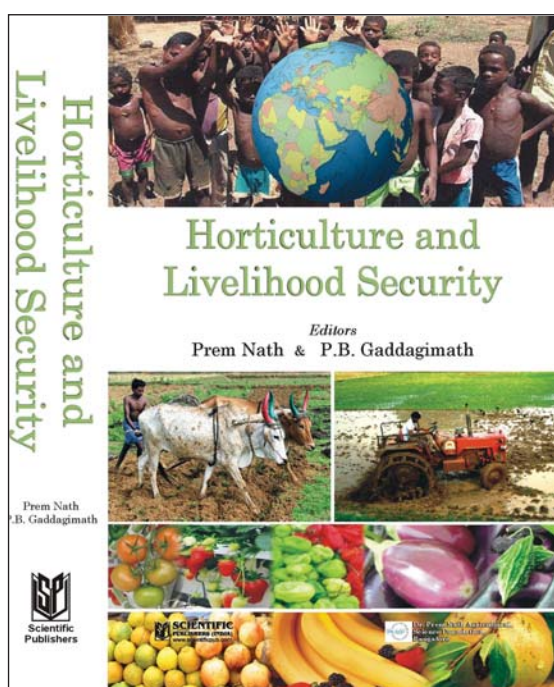
About the New Book

HORTICULTURE AND LIVELIHOOD SECURITY

Edited by: Dr. Prem Nath & Mr. P.B. Gaddagimath

ISBN: 978-81-7233-674-5, 2011, 552pp., Rs. 2450/-

This time more than 800 million people were suffering from hunger and malnutrition, evidently they had no access to food and now the number of those hungry people has increased to one billion, in spite of efforts to mitigate it. The question is how to access the food to those who have no capacity to have it. The farmers have worked to their capacity within the resources available to produce food, and now it is the turn of the governance of countries to enhance the capacity of the people to access the food for their



livelihood. The answer is increased employment and income generation. Thus livelihood has different dimensions and facets, but modern life and living, food has emerged with important components like adequacy, nutrition and health requirements which have been designated as food security, nutrition security and health security. Hence, horticulture is a serious stake holder as described in the present publication.

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Thesis Submitted-

- The following M. Sc. thesis was submitted and approved by the University of Agricultural Sciences (UAS), Bangalore
- "Development of Iron Rich Formulations From Shepu Greens (*Peucedanum graveolens*) and its Impact on School Children" by Shalmali Naik, PNASF scholar.

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Plans on hand

While the ongoing activities will continue, the PNASF proposes to undertake new programmes and activities;

- ↪ Jointly organizing Regional Symposium-High Value Vegetables in South East Asia: Production, Supply and Demand scheduled on January 24-26, 2012, Chiang Mai, Thailand
- ↪ Participation in conferences/Symposium/Workshop/Congress;
- ↪ Awards/grants to university students and researchers to continue ;
- ↪ Collaborate with the national and international institutions/associations in the area of food and nutrition security etc.;
- ↪ Publication of the PNASF News Letters.

OPPORTUNITIES

Awards/Scholarships

PNASF encourages universities/institutions to institute PNASF Medal Awards for outstanding post-graduate students/young scientists working on research problems augmenting food and nutrition security and invites them to support these activities through funds.

Field Projects

PNASF invites societies/associations/NGOs interested in implementing small rural community projects on self help income generation augmenting food security, for any assistance.

Publications

The PNASF publications are available on price with the Central Secretariat, PNASF, Bangalore, India.

Contribution/Membership

Registration/membership/contribution either to PNASF or to VEGINET available at

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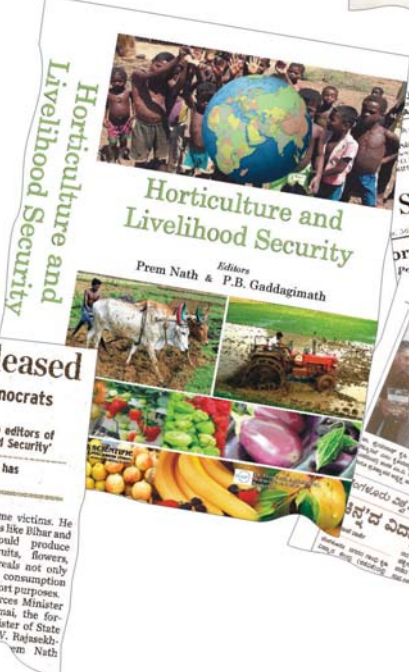
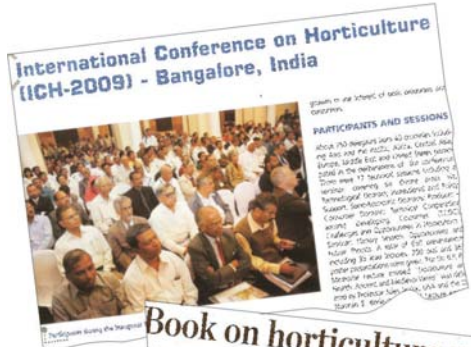
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NEWS REPORT CLIPPINGS



Book on horticulture released
 is a collection of 39 essays by scientists, technocrats

Special Correspondent

BANGALORE: Governor H.R. Devaraj Urs on Saturday released the book "Horticulture and Livelihood Security" edited by Prem Nath, the former Assistant Director-General, Food and Agriculture Organization of the United Nations and P.B. Gaddagimath, former Information and Publication Officer, Indian Institute of Horticultural Research.

The 552-page book elucidates the connection between horticulture sector and livelihood security. It contains 39 articles by scientists, technocrats, development personnel and policy makers. It has been published by Scientific Publishers (India), Jodhpur.

Speaking on the occasion, Mr. Bhardwaj called for integrated development of agriculture, horticulture and allied sectors, especially in Karnataka, as that is the cultivable land source that still needs attention.

He said that States like Bihar and Karnataka could produce fruits, flowers, pulses and cereals not only for domestic consumption but also for export purposes.

Water Resources Minister Basavaraj Bommai, the former Union Minister of State for Planning, M.V. Rajasekharaiah and Dr. Prem Nath



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