

Chairman, PNASF Speaks

The hunger of food can be mitigated by food security, nutrition can be augmented by the remedial measures on nutrition security, and health can be protected and improved by the intake of necessary food which play a dominant role. But the hunger of knowledge and science on biology and agriculture can not be mitigated by any measure but will remain alive with continued research as long as human beings will survive on earth.

In these years, six billion people will demand for food and the scientists as well as the farmers will continue to explore more food on soil and in water for the future generation. In search for food, scientists have utilized food crops and continue to research on underutilized crops for food, nutrition and health.

In the present and upcoming scenario, the horticulture is emerging as the second line of defense in the food domain both in the developed and developing countries. The horticulture sub-sector is growing in its importance in contributing substantially to food security, in providing adequate nutrition to the people and is preventing non-communicable diseases like some cancer, diabetes, blood pressure, obesity etc. With the growing knowledge on nutraceutical values of fruits and vegetables, and the breeding and improvement of vitamin or mineral specific fruits or vegetables have brought tremendous hope on the production and consumption of these crops. In addition, the studies on medicinal crops have shown great potential on its medicinal values for medical health.

Apart its usefulness mentioned above, the importance of horticulture lies in its capacity to produce much more food, vitamins, minerals, fibers and mineral water per unit area and per unit time as compared to other crops. The processing of horticultural products have opened wide opportunities and brought in big value addition to food. The present growing trend of supply and of market chain stores and the establishment of fresh and processed food chain stores have shown tremendous growth of horticulture industry both in the developed and developing world. The horticulture provides much needed opportunity for employment and income generation.

It is opportune time to diversify agriculture and invest in horticulture. The Indian National Horticulture Mission has taken appropriate steps in this direction. We expect both the national and international organizations to take lead and guide. We look forward to the support and contribution of the Food and Agriculture Organization of the United Nations. Likewise, the non-government organizations like the GlobalHort, International Society for Horticulture Science, Vegetable Science International Network and others could augment the steps on horticultural research and development and assist in strengthening the linkages among the stake holders.

In this context, the Dr. P. N. Agricultural Science Foundation (PNASF) and Vegetable Science International Network (VEGINET) along with other national and international organizations have taken timely action to organize the International Conference on Horticulture (ICH-2009) scheduled during November 9-12, 2009 in Bangalore which will examine and identify the growing impact of horticulture on livelihood security and economic growth.

Prem Nath
 (Prem Nath)

EVENTS

National

Chairman, PNASF Nominated as the Resource Person to the IIHM, Bangalore

The Board of Management of the newly established International Institute of Horticulture Management (IIHM) in Bangalore, nominated Dr. Prem Nath as a Resource Person to develop its programme. The IIHM is an initiative of the Ecumenical Christian Centre (ECC) and is located at its Campus in Whitefield, Bangalore. IIHM is a manifestation of ECC's commitment to ecology and preservation of planet Earth. It aims at educating young men and women in scientific management of horticultural crops.

TAC Member Visits PNASF

Dr. K. G. Ahuja of Chicago, life-long horticulturist, and the founder TAC member, visited PNASF from 26th to 30th November, 2008. He was updated on the activities of the PNASF, which he appreciated.

Dr. Ahuja had detailed discussion with Dr. K. R. M. Swamy and Dr. Prem Nath on the draft manuscript of the proposed book entitled "Our Foods and Nutrition" authored by him. He submitted the first draft for its finalization by the PNASF intended to be published during 2009. This publication, meant for common people, will enhance the knowledge on the nutritive value of different types of foods and nutrition of the people.

New TAC Member



On the recommendation of the Technical Advisory Council (TAC), the Board of Trustees of the PNASF is pleased to approve the nomination of Dr. B. S. Prabhakara, former Principal Scientist of the Indian Institute of Horticultural Research, Bangalore as a new member of the TAC. The PNASF congratulates and welcomes Dr. Prabhakara as an esteemed member of the technical team and look forward to his contribution to the development and implementation of the PNASF programmes and activities. Dr. Prabhakara has been very active as the coordinator of the school project entitled, "PNASF/MHPS/2005/Biological Science and Nutrition Project"

USA Focal Point on VEGINET Visits PNASF

Dr. Usha Palaniswamy, Chair, Division of Natural Sciences and Mathematics, Excelsior College, Albany, New York, visited

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PNASF on 19th and 20th December, 2008. Dr. Usha is the member of the VEGINET and the focal point for the members in the USA since 2007. She has been taking interest in the activities of the VEGINET and also had presented the activities under the USDA-ISE Programme-Award-2006-2011 during the Annual Conference of the American Society of Horticultural Science.

Dr. Usha held detailed discussion with Dr. Prem Nath on the activities of the PNASF and its mission, programmes and projects related to promotion of agricultural education, research and development. The ongoing field projects on the nutrition of school children in the urban community and on women development in the rural community were explained. Dr. Nath informed the preparations of PNASF initiated and sponsored International Conference on Horticulture (ICH-2009). Dr. Usha showed keen interest in participation during the conference along with VEGINET members in the USA.

Dr. Usha was also briefed on the ongoing activities of the VEGINET including the sponsorship to the ICH-2009. Dr. Usha was appreciative of the activities of the PNASF and VEGINET and agreed to participate in the ICH-2009 during November 9-12, 2009. She thanked PNASF for hosting her visit to Bangalore.

Visit of the Nuffield Scholar from Australia

The PNASF had been identified to coordinate and conduct the study visit of the Nuffield Scholarship recipients in India by Nuffield Farming Scholarship Trust, Leicestershire, UK.

The first batch of scholars viz; Mr. Jack Milbank, an Australian horticulture grower and Mr. Romain Vacherot, a French grower visited India and PNASF during November 2007 and shared their experiences with the growers and scientists of India.

During the current year, Mr. Sam Archer, an Australian grower visited India and the PNASF and held discussion with Dr. Prem Nath on 05th July, 2008. His area of interest centered around Environmental Resource Management. These visits have generated interest of contacts between the Indian and Australian farmers and farm-business entrepreneurs.

Visit to the Ministry of Rural Development, Government of India, New Delhi

Dr. Prem Nath, Chairman, PNASF visited the Ministry of Rural Development on 10th July, 2008 and held discussions with the Dr. (Mrs.) Rita Sharma, Secretary, Department of Rural Development, on the upcoming International Conference on Horticulture (ICH-2009) scheduled during November 9-12, 2009 in Bangalore and on the issues of agriculture and rural development. Dr. (Mrs.) Sharma explained the rural development programmes initiated by the Ministry and showed interest in the ICH-2009, the theme of which centered around the rural masses. She mentioned that the participation of CAPART in this conference would be useful and showed interest in some of the technical sessions. She also assured support and cooperation for the conference.

Visit to the Ministry of Agriculture, Government of India, New Delhi

Dr. Prem Nath visited the Ministry of Agriculture, New Delhi on 10th and 11th July, 2008 and had discussion with the senior officials

in relation to the upcoming International Conference on Horticulture (ICH-2009). Separate meetings were held with Mr. R. K. Tiwari, Joint Secretary (Extension); Mr. S. K. Pattanayak, Joint Secretary (National Horticulture Mission); Dr. M. L. Chaudhary, Horticulture Commissioner and Dr. M. J. Chandre Gowda, Additional Commissioner (Extension). The discussion centered around sharing of knowledge on different programmes and activities of respective departments in the promotion of agriculture and horticulture sector for the benefit of the stakeholders. The officials showed interest and expressed their support by way of their participation and possible contribution to the conference.

International

PNASF Participates in ISHS IV Balkan Symposium on Vegetables and Potatoes at Plovdiv, Bulgaria

Dr. Prem Nath, Chairman, PNASF, participated in the ISHS IV Balkan Symposium on Vegetables and Potatoes held during September 9-12, 2008 in Plovdiv, Bulgaria. About 350 delegates from 20 countries, mostly from the Balkan region participated. About 145 oral and postal papers on research and development of vegetable crops and potato were presented.



- Dr. Prem Nath along with the participants arriving at the symposium
- Dr. Prem Nath delivering the Key paper at the inaugural session
- Participants of the Balkan Symposium

Dr. Prem Nath, presented the key paper entitled, "Vegetables For Food and Nutrition Security", during the inaugural session on 9th September 2008. The published abstract of the paper is reproduced below:

Vegetables For Food and Nutrition Security, Dr. Prem Nath, PNASF, Bangalore. Inaugural Session: Planery Lectures.

Book of Abstracts: *ISHS IV Balkan Symposium on Vegetables and Potatoes held September 9-12, 2008*, page 19.

Vegetables For Food and Nutrition Security Prem Nath

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About 815 million people suffer from hunger and malnutrition, mostly in the developing world. By 2020, the developing world is expected to face the overwhelming challenge of 97.5% increase of population; moreover, the developing countries will face serious challenge with its trend of major shift in population from rural to urban areas. According to WHO an estimated 334 million children in developing countries are malnourished. In 2020, one out of every four children in these countries will still be malnourished. It is recognized that modern agriculture must diversify production and achieve sustainable higher output to supplement food security. In order to release the pressure on cereals as well as to improve upon the human nutrition through consumption of other nutritious crops, diversification in cropping pattern provides better option. The increased production and consumption of vegetables with its wide adaptation and provider of important nutrients (especially vitamins and minerals), offer promise for the future. According to FAO/WHO, recent experimental evidences have shown that, adequate consumption of fruits and vegetables prevent some non-communicable diseases such as cancer, diabetes, blood pressure, obesity etc., Vegetables are high in productivity than other crops and provide more food and nutrition per unit time and area of land.

Visit to the Agricultural Research Institutes in Bulgaria

During his visit to Bulgaria during the IV Balkan Symposium on Vegetables and Potatoes, held during September 9-12, 2008, Dr. Prem Nath took initiative to visit the following research institutes in Plovdiv.

- Maritsa Vegetable Crops Research Institute, Plovdiv.
- Fruit Growing Institute, Plovdiv.
- Institute of Plant Genetic Resources, Sadovo.

At the Vegetable Institute, Dr. Nath met the Director, Dr. Stoyka Macheva and her colleagues viz; Dr. Moroslav Michov and Dr. Valentina Petkova. The breeding of vegetable crops and variety maintenance, especially in tomato, pepper, potato, cucumber, onion,



Dr. Prem Nath with the Director and the scientists at the Vegetable Crops Research Institute

cabbage, green pea and garden bean occupied a fundamental part in the work of the Institute.

At the Fruit Institute, Dr. Nath had discussions with the Deputy Director, Dr. Zarya Rankova and her colleague Dr. Stefan Gandev. The research activity of the Institute was concentrated on two departments viz; Breeding, Genetic Resources and Biotechnology and Fruit Growing Technologies. The researches on apple, walnut and other crops were interesting where introduced and bred varieties



Dr. Prem Nath with Dr. Zarya Rankova and Dr. Stefan Gandev

performed well. An interest was shown in having an Indian Expert on pistachio.

Dr. Prem Nath visited Institute of Genetic Resources, headed by the Director, Dr. Liliya Krasteva has been well established with good facilities of laboratory and field in storage, and experimentation. Dr. Marina Marcheva explained that the preservation of the plant biodiversity from the cultural and wild flora is the research priority of the Institute with the main activities on preservation, management and utilization of plant genetic resources in Bulgaria. A rich germ-plasm collection consists of wheat, grain forage, legumes, vegetables, ornamentals and medicinal plants. Enrichment of the plant gene-fund with 950 to 1350 samples is carried out annually.



Dr. Liliya Krasteva with Dr. Prem Nath

Dr. Prem Nath Meets the Executives of the International Society for Horticultural Science (ISHS), Belgium

During the IV Balkan Symposium on Vegetables and Potatoes held during September 9-12, 2008 in Plovdiv, Bulgaria, Dr. Prem Nath, Chairman, PNASF held discussion individually with the President of the ISHS, Dr. Norman E. Looney and Chief Editor of the ISHS, Professor Jules Janick.

Dr. Nath and Dr. Looney shared their views on the development of horticulture in the present and the upcoming scenario in the light of the growing importance and the contribution of fruits and



Dr. Rober J. Bogero, Dr. Antonio A. Monteiro, Prof. Jules Janick and Dr. Jung-Myung Lee of ISHS with Dr. Prem Nath

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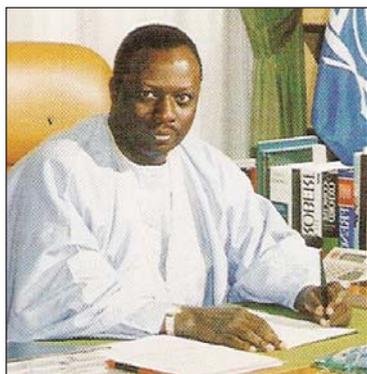
vegetables toward nutrition security and health improvement in the wake of the movement of the population from rural to urban areas and the pivotal role of peri-urban horticulture and its predominance in the agriculture sector.

Dr. Janick and Dr. Nath discussed the origin, distribution, evolution, compatibility of cucurbitaceous and other vegetable crops across the globe.

Dr. Prem Nath Visits Food and Agriculture Organization of the United Nations (FAO), Rome

Dr. Prem Nath, Chairman, PNASF visited the FAO headquarters in Rome during September 15-19, 2008 and held discussions with the senior officials on global issues on food and agriculture in the present and future scenario and the upcoming International Conference on Horticulture (ICH-2009) scheduled during November 9-12, 2009 in Bangalore. The officials welcomed the visit and appreciated the useful discussion held.

Meeting with Dr. Jacques Diouf, Director General



Dr. Jacques Diouf

An official meeting was held with the Dr. Jacques Diouf, Director General, on September 16, 2008. Dr. Jacques Diouf welcomed the visitor in his office and Dr. Nath gave warm greetings to him. The discussion was highlighted on the global issues viz; farming becoming un-remunerative (eg. rice) in the developing world, increased importance of peri-urban and urban agriculture in

the wake of massive movement of population from rural to urban areas, impact of FAO's Special Programme on Food Security and growing importance of Horticulture in the context of nutrition security and human health.

Dr. Nath mentioned that in the present and upcoming scenario, horticulture is emerging as the second line of defense in the food domain. The horticulture sub-sector in agriculture and food sector is becoming more relevant and significant than before, which required technological, policy and strategic planning considerations. In this context, Dr. Prem Nath informed that the PNASF in collaboration with other national and international organizations is organizing an *International Conference on Horticulture (ICH-2009)* with the theme entitled, "*Horticulture for Livelihood Security and Economic Growth*" scheduled during *November 9-12, 2009* in Bangalore, India. The Director General was requested for the participation of the FAO and the invitation was extended to him and his colleagues to the conference. Dr. Nath presented a copy of the first announcement to Dr. Jacques Diouf, who wished success to the conference.

Meeting with Mr. James Butler, Deputy Director General

Dr. Nath and Dr. Butler exchanged warm greetings during their meeting on September 15, 2008. They had a cordial and useful

discussion on some of the global issues of food and agriculture. Dr. Nath explained about the upcoming *International Conferences on Horticulture (ICH-2009)* with the theme entitled, "*Horticulture for Livelihood Security and Economic Growth*" scheduled during November 9-12, 2009 in Bangalore, India. Dr. Nath made submission for FAO's support to the conference.

Meeting with Dr. Modibo T. Traore, Assistant Director General, Department of Agriculture and Consumers Protection



Dr. M. T. Traore and Dr. Prem Nath

Dr. Traore and Dr. Nath had exchange of views and sharing of knowledge on the major issues faced by the agricultural sector in the developing world during their discussion on September 17, 2008. Among other issues, it was an opportune time to examine the impact of agriculture/horticulture on livelihood security with particular reference to food and nutrition security and health improvement. He understood that the horticulture was emerging as the second line of defense in the food domain which is being felt both in the developed and developing countries.

In this context, Dr. Nath informed Dr. Traore about the upcoming *International Conferences on Horticulture (ICH-2009)* with the theme entitled, "*Horticulture for Livelihood Security and Economic Growth*" scheduled during November 9-12, 2009 in Bangalore, India and extended invitation for the active participation of the agriculture department. Dr. Traore supported this initiative because of its relevance in the present agricultural context and its timelines and expressed active participation of his colleagues in the conference.

Meeting with Dr. Hafez Ghanem, Assistant Director General, Department of Economic and Social Development

On September 17, 2008 Dr. Nath and Dr. Ghanem had lively discussion on national and global issues of mutual interest. The discussion was highlighted on the relevant issues which had economic bearing on the over all agriculture development leading to economic growth. It was felt that a study be made to understand clearly the contribution of agriculture/horticulture growth to the economic growth of a country and of countries. Further, the contribution of agriculture/horticulture could be gauged not only on the livelihood security but the nexus between livelihood security and economic growth could also be examined. Dr. Ghanem welcomed the discussion and expressed continued collaboration. Dr. Ghanem was also pleased with the initiative of the upcoming ICH-2009 and expressed his interest in participation.



Dr. Hafez Ghanem and Dr. Prem Nath

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Meeting with Mr. Jose Maria Sumpsi Vinas, Assistant Director-General, Technical Cooperation Department

Dr. Nath on September 16, 2008, held detailed discussion with Dr. Sumpsi on issues of mutual interest. Dr. Nath referred to the project entitled "Augmenting Nutrition and Health of School Children for Urban and Peri-Urban Communities" originally submitted by the PNASF to the former ADG/TC earlier and a copy of which was submitted to him during this meeting. Mr. Sumpsi expressed his interest in the project and assured a progressive action. Dr. Nath thanked Mr. Sumpsi for his considered co-operation and support.

Meeting with Dr. Shivaji Pandey, Director, Plant Production and Protection Division

Dr. Nath and Dr. Pandey had interesting and useful technical discussion on issues facing agriculture and the agricultural technology during their meeting on September 16, 2008. They shared the views that the impact of technology be examined on the livelihood of beneficiaries and its linkage to the economic growth catalyzed by the policy considerations. Dr. Pandey appreciated the theme and timeliness of the upcoming ICH-2009 and expressed active participation of its team members in the conference. Dr. Nath expressed appreciation of the discussion held.

Meeting with Dr. Ezzeddine Boutrif, Director, Nutrition and Consumer Protection Division



Dr. Ezzeddine Boutrif and Dr. Prem Nath

Dr. Prem Nath had a meeting with Dr. Boutrif on September 17, 2008 and held detailed discussion on issues of mutual interest particularly in the area of nutrition security and health improvement. Dr. Nath benefited out of the discussion and report on the nutrition programme and projects particularly on school children. Dr. Boutrif welcomed the initiative of the upcoming *International Conferences on Horticulture (ICH-2009)* with the theme entitled, "*Horticulture for Livelihood Security and Economic Growth*" scheduled during November 9-12, 2009 in Bangalore, India. Dr. Nath requested that the present and upcoming scenario of nutrition and health be presented to the participants of the ICH-2009 from both the developed and developing countries. Dr. Boutrif appreciated the discussion and expressed his support to the ICH-2009. Dr. Boutrif showed keen interest in the ongoing PNASF projects on nutrition of the school children. Dr. Nath discussed with him the PNASF project entitled, "Augmenting Nutrition and Health of School Children for Urban and Peri-Urban Communities" submitted to the ADG/TC. Dr. Nath thanked Dr. Boutrif for his expression of support.

Dr. Nath requested that the present and upcoming scenario of nutrition and health be presented to the participants of the ICH-2009 from both the developed and developing countries. Dr. Boutrif appreciated the discussion and expressed his support to the ICH-2009. Dr. Boutrif showed keen interest in the ongoing PNASF projects on nutrition of the school children. Dr. Nath discussed with him the PNASF project entitled, "Augmenting Nutrition and Health of School Children for Urban and Peri-Urban Communities" submitted to the ADG/TC. Dr. Nath thanked Dr. Boutrif for his expression of support.

Meeting with Mr. Abdul Kobakiwal, Chief, Special Programme for Food Security

Dr. Nath and Mr. Kobakiwal had fruitful discussion on the FAO's Special Programme for Food Security on September 17, 2008. Dr. Nath was pleased to learn about the progress and achievements made on Special Programme for Food Security, since its inception in



Dr. Prem Nath with Mr. A. Kobakiwal

1994. It was very satisfying that the programme which started with 14 countries had grown and expanded to 114 countries. It was encouraging that the FAO sponsored projects were now nationally sponsored and owned giving rise to the sustainability of the programme. Dr. Nath congratulated Mr. Kobakiwal and the FAO for its achievements. He expressed that the presentation of these achievements to the ICH-2009 will be useful to the participants of the conference.

Dr. Prem Nath Meets Ms. Alison Hodder, Senior Officer and Mr. Wilfried O. Baudoin, Consultant, Horticulture Crops Group

Dr. Nath held detailed and useful discussion with Ms. Hodder and Mr. Baudoin to whom he presented the subject of the upcoming *International Conferences on Horticulture (ICH-2009)* with the theme entitled, "*Horticulture for Livelihood Security and Economic Growth*" scheduled during November 9-12, 2009 in Bangalore, India. Both Ms. Hodder and Mr. Boudoin appreciated the initiative of the PNASF on holding the international conference which was so relevant and timely on its theme and rich in its contents. Ms. Hodder considered that the contribution of FAO to this conference will be useful in the interest of the national and international participants. Dr. Nath mentioned that the presentation of the global project like HORTIVAR to the conference will achieve its objective appropriately.



Mr. Wilfried Baudoin, Mrs. Alison Hodder and Dr. Prem Nath

On behalf of the PNASF and on his personal behalf Dr. Prem Nath place on record the high appreciation of the officials, who showed their receptivity, held fruitful discussion and provided necessary

assistance with great warmth and friendliness, keeping the spirit of the top agricultural organization available to the world.

Visit to the FAO Regional Office, Asia and the Pacific, Bangkok

During July, 2008, Dr. Prem Nath visited the FAO Regional Office for Asia and Pacific (RAP) in Bangkok, Thailand. He had discussion with the Assistant Director General and Regional Representative, Dr. Changchui He; Mr. Hiroyuki Konuma, Deputy Regional Representative; Mr. N. M. Hla, Chief Management Unit; Dr. Biplab K. Nandi, Senior Nutrition Officer; and officials of the Policy and Programmes. Dr. Nath presented the upcoming *International Conference on Horticulture (ICH-2009)* to Dr. He and his colleagues who appreciated the efforts of the PNASF and its collaborators for this initiative and considered the conference theme timely and useful among the stakeholders. They expressed their support and possible participation.

RESEARCH AND DEVELOPMENT SUPPORT

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

Members of the monitoring team visited the project site of the Self Help Group on 21.12.2008 and assessed the present status of the project. The findings have been summarized in table -1. The milk yield of the mother cows varied from 4-10 litres per day which is being sold to the milk cooperative society @Rs12/lt. Out of five female calves supplied to the beneficiaries along with the mother cows, one female calf is of six month old, three calves are one year old and one is dead. Of these, one female calf has been inseminated and the remaining are ready for insemination. The three new born female calves are healthy and are 4-6 month old now. Five mother calves are due to deliver during Jan – Mar 2009 and one cow has been inseminated recently. By the end of 2008, seven out of ten beneficiaries owning one original mother cow each, would be the proud owners of two new milching cows, providing them with assured livelihood security.

Present status of the cows at the project site as on 21st December, 2008: ID Halli, Karnataka

Name of the Beneficiary	Milk Yield/ Day (Ltr)	Status of Original Calf Supplied		Status of new born calf	Status of the Mother Cow
		Male Calf	Female Calf		
Mrs Manjula	5	Donated	-	Female calf 4 months old	Mother + female calf healthy
Mrs. Gangamma	8	Donated	One year old to be inseminated	-	Next delivery Jan 2009 milk yield stopped
Mrs. Noor Janan	4	Donated	One year old already inseminated	-	Next delivery March, 2009
Mrs. Timmaka	10	Donated	Dead	-	Next delivery March 2009 milk yield stopped
Mrs. Anitha	5	Donated	-	Female calf 4 months old	Mother + female calf healthy
Mr. Lakminarasimma	—	—	Cow sold away	—	
Ms. Anjanamma	4	Donated	-	-	Next delivery March 2009
Mrs. Gayathri	5	-	One year old to be inseminated	-	Next delivery January, 2009 milk yield stopped
Mother of Mrs. Madhu	4	-	One year old to be inseminated	Mother cow to be inseminated	
Daughter of Narasappa	6	Donated	-	Female calf 4 months old	Mother + female calf healthy

The beneficiaries showed satisfaction and happiness with the ownership of the project and the implementation team confirmed very good progress of the project during the period under report.

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

During the period of reporting it was the fifth cropping season for the activities at the Middle Higher Primary School (MHPS), Geddalahalli and the first cropping at the Daffodils English School



Students sowing vegetable seeds

(DES), Sanjayanagar. The MHPS is the school of the Government of Karnataka, whereas the DES belongs to the private sector. Both the schools are located in the urban area of Bangalore but the beneficiary students of the two schools have significantly different socio economic and knowledge background.

The programme of the ongoing cropping season was approved for both the schools- MHPS, Geddalahalli and DES, Sanjayanagar. Thirty (30) students from 5th, 6th and 7th standards were selected from both the schools. At DES, the students have filled the pre project questionnaire for evaluation of their awareness and knowledge of vegetables and fruits and nutrition. They were also briefed about growing vegetables in containers and they had practical classes about preparation of potting mixture and filling the bags with the mixture. They have sown the seeds of French bean, cowpea, radish, okra. The students have observed the growth pattern of different vegetables and vegetative and economic parts of these plants. At both the centers the crops are performing well and the students are excited about learning the plant growing.

INTERNATIONAL CO-OPERATION

The Dr. Prem Nath Agriucultural Science Foundation, Bangalore in association with Vegetable Science International Network (VEGINET), Bangalore and University of Agricultural Sciences (UAS), Bangalore would be organizing an International Conference on Horticulture (ICH-2009) from 9th to 12th November, 2009 at Bangalore, Karnataka, India. The response on the first announcement of the ICH-2009 has been quite encouraging nationally and across the globe, and look forward for higher participation from various stake holders.

Second Announcement

International Conference on Horticulture (ICH-2009)-

“Horticulture for Livelihood Security and Economic Growth”

November 9-12, 2009, Bangalore, India

Invitation

The Organizing Committee has great pleasure in inviting all the scientists, students, policy makers and progressive farmers to the International Conference on Horticulture for Livelihood Security and Economic Growth, which will be held in Bangalore from November 9-12, 2009. The conference will be organized by the Dr. Prem Nath Agricultural Science Foundation (PNASF), Bangalore; Vegetable Science International Network (VEGINET), Bangalore and University of Agricultural Sciences (UAS), Bangalore in collaboration with Department of Horticulture, Government of Karnataka, Bangalore ; Institute of Social and Economic Change (ISEC), Bangalore ; Central Food Technological Research Institute (CFTRI), Mysore; Indian Council of Agricultural Research (ICAR), New Delhi; Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India, New Delhi; Food And Agriculture Organization of the United Nations (FAO), Rome; International Centre of Underutilized Crops (ICUC), Colombo; International Society for Horticultural Science (ISHS), Belgium, International Centre for Agricultural Research in the Dry Areas, (ICARDA), Syria, International Crops Research Institute for the Semi-Arid Tropics, (ICRISAT), Hyderabad, Asian Vegetable Research and Development Centre (AVRDC), Taiwan, Asian Institution of Technology (AIT), Bangkok.

The Conference

Many developing countries are facing the problems of decelerated agricultural growth at macro level coupled with falling real prices of farm products, and contributing declining share to GDP without any considerable shift of population from agriculture to non-agricultural sector. Added to these problems is the problem of depleting and degrading natural resource base for farming, threatening the very livelihood security of a majority of subsistence farmers. The farming industry is getting unremunerative in many countries of the developing world.

In India, the policies and programmes designed and implemented in farming sector have not addressed the problems of agricultural sector either. The failures of identifying right growth priorities within farming sector, and design and implementation of appropriate

agricultural development policies and programmes have culminated in farmer's distress. At this juncture horticultural crops are new hope in providing economic security and further growth.

It is imperative for the developing world with about 815 million people suffering from hunger and malnutrition to realize that the production and consumption of horticultural products could play a key role in providing nutrition and health security to the people. Further, given the high degree of agricultural development segmentation with a small percentage of commercial farmers and a great majority of subsistence farmers, horticultural development could provide an opportunity to bring the subsistence and bypass farmers into the development orbit; if the appropriate technological, institutional and policy designs are identified and implemented.

The conference is designed to provide a common forum for all stake holders to share their experience and expertise so as to suggest much needed technology-institution policy package for sustainable production and marketing of horticultural products to augment employment-income generation to ensure livelihood security of the subsistence farmers without further depleting and degrading the natural resource base.

Objective

To identify key factors and elements influencing the sustainability of horticulture sector in developing countries and suggest remedial measures to issues and problems confronting this in achieving livelihood security and increased economic growth, through participatory dialogues, exchange of knowledge, genetic materials and human resources among all the stake holders.

Theme Areas

The main Theme Areas identified with the chairpersons for the conference are;

I. Technological Domain

Sessions

1. Improved crops: Dr. Vishnu Swarup
2. Crop management: Dr. Kirti Singh
3. Crop protection: Dr. Anupam Varma
4. Underutilized crops: Dr. Hannah Jaenicke
5. Crop diversification: Dr. K. V. Peter
6. Seed production: Dr. K.P. Vasanth Shetty
7. Post-harvest management: Dr. V. Prakash

II. Institutional and Policy Support: Socio – Economic Domains

Sessions

1. Technology generation, transfer and utilization: an examination of three subsystems: Dr. C. Prasad
2. Screening technologies for horticultural development in socio economic and agro climatic perspectives: Dr. R. B. Singh
3. National agricultural policy and programmes: Dr.M. L. Chaudhary

INTERNATIONAL CO-OPERATION

4. Economic growth: Prof. R. S. Deshpande
5. Food, nutrition and health security: Dr. Prem Nath
6. Nexus between livelihood security and economic growth: Dr. S. Bisalaiah
7. Technology-Institution policy support for preventing the depletion and degradation of natural resource base: Dr. P. K. Joshi
8. Policy for domestic and export market: Dr. Ramesh Chand

III Producer- Consumer's Domain

Sessions

1. Market and supply-chain management: Dr. P. G. Chengappa
2. Strategies for value addition: employment and income generation to farmers: Dr. V. Prakash
3. Emerging market for new products. Eg. organic products: Mr. Thakur Uday Singh

IV. Technical Cooperation Among Developing Countries (TCDC): Dr. Prem Nath

V. Opportunities and Future Thrusts

- Panel members
- Presentation of the chairpersons
- Recommendations

Invited Speakers

- Medieval horticulture and health-Prof. Jules Janick, USA
- Contribution of horticulture to the livelihood security – experienced gained and future prospects-FAO, Rome
- Emerging role of horticulture in nutrition security and health improvement-FAO, Rome
- Enhancing the livelihood of poor farmers with sustainable techniques for production of high value horticultural crops with less water-Dr. Mohamoud Solh, ICARDA, Syria
- The role of genetic resources in the future of horticultural crops- Prof. Liliya Krasteva, Bulgaria
- Dynamics of technologies in horticulture for improving production, productivity and profitability-Dr. H. P. Singh, India
- The potential of production and marketing of underutilized crops by urban producers-Dr. Remi Kahane, Tanzania
- In vitro plant breeding of horticultural plants-Prof. Acram Tazi, Australia
- Hydroponics for urban and periurban horticulture-Dr. G. P. Gianquinto, Italy
- Impact of improved vegetable varieties in overcoming food insecurity-Dr. J. S. Dias, Portugal
- The role of soilless plant production in ascertaining food security-Dr. Michael Raviv, Israel

- vegetable production in south east asia-Dr. M. L. Anothai Choombai, Thailand
- improving production and productivity in vegetable crops-Dr. D. J. Cantliffe, Florida, USA
- Improving productivity in horticultural crops-Prof. Michael Boehme, Germany
- Crop diversification with horticultural crops for enhancing incomes and improving livelihood of farmers in dry land areas.-Dr. C. L. L. Gowda, ICRISAT, India
- Underutilized and underexploited leafy vegetables as a source of fiber and anti-oxidants-Dr. Sadhan Kumar, India
- Special programme for food security-FAO, Rome
- Contribution of horticulture to nutrition security in Asia-Dr. A. Talukder, Cambodia
- Contribution of vegetable crops to address poverty, hunger and malnutrition in South Asia-Dr. M. L. Chadha, AVRDC, South Asia Centre, Hyderabad
- Diversities in income and opportunities with underutilized crops in India-Dr. Narayan. G. Hegde, India
- Indian horticulture and food security-Dr. Surabhi Mittal, India
- Management of complex stresses in plantation crops-Dr. P. Rathinam, India
- Vegetable seed industry-global scenario-Dr. Robert Bop Mullins, Singapore
- Development of virus resistant trans genes in horticultural crops-their prospects and risks to food security-Dr. Anupam Varma and Dr. P. K. Jain, India
- Horticulture development in West Africa, impact on food security and poverty alleviation-Dr. Gora Beye, Senegal
- Present status and future prospects of horticulture sector in Bangladesh-Dr. Golam Rabbani, Bangladesh
- Asian small holder vegetable farmers as IPM experts: experiences from the FAO Regional Vegetable IPM Programme (2002-08)-Dr. Johannes W. Katelaar and Dr. Prabhat Kumar, Thailand
- Successful models of crop diversification-Dr. Usha Palaniswamy, USA
- Biotechnological approaches and achievements made in developing stress tolerance in horticultural crops in India-Dr. P. Anandkumar, India
- Integrated pest management in horticulture crops and its impact on food safety-Dr. P. Parvatha Reddy, India
- Vegetable Science International Network- Dr. Prem Nath and Dr. Anupam Varma, India
- Impact of climate changes on the productivity of horticultural crops and economic growth of small and marginal farmers-Dr. V. S. Prakash, India

INTERNATIONAL CO-OPERATION

- Retrospects and prospects of horticulture in Karnataka- Dr. S. B. Dandin, India
- Emergence of organized retailing in India- its impact on horticulture farmers-Dr. P. G. Chengappa, India
- Changing consumer demand pattern in India- policy needs- Dr. Ramesh Chand, India
- Linking producers and consumers of horticultural produce- need for vertical integration-Dr M. Ravindran, India
- Commodity futures and its relevance for India-Dr. G. Srivatsava, India
- Contract farming initiatives for horticultural crops in India- Dr. P. K. Mandanna and Dr. C. P. Gracy, India
- Market opportunities for organic horticultural produce-Dr V.C. Reddy, India

Presentation of Papers

Papers are invited from scientists/researchers, professors, development personnels, policymakers, technocrats, progressive farmers and other stake holders of horticultural sector. The results of the studies conducted should demonstrate its positive impact on the living conditions of farmers and its economic growth, particularly, the food, nutrition and health security and income generation.

Language

The official language of the conference will be English.

The Programme

The programme will include;

1. Country reports by invited speakers
2. Oral presentation on selected topics
3. Poster presentation
4. Panel discussions
5. Professional tours
6. Social events

Deadlines

First announcement	June, 2008
Second announcement	January, 2009
Submission of abstract and full paper	May 31 , 2009
Acceptance of presentation as oral or poster	July 31 , 2009
Registration/Accommodation/Exhibition, Demonstration etc	June 30, 2009

Venue

The Conference will be organized in Bangalore, the Capital city of Karnataka (India), which is formerly known as the Air Conditioned City of India. The climate during November will be very pleasant

with moderate temperature and clear sky. The green city is well connected by Road / Rail / Air. The airport is approximately 35 Km from the city. Arrangements for transportation and stay of delegates will be made on request.

Organizing Committee

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Dr. D.P. Kumar, Professor and Head of Horticulture, UAS, Bangalore

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Dr. P.V. Shenoi, Former Special Secretary to the Government of India, Bangalore

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 Dr. K.V. Peter, Director, World Noni Research Foundation, Chennai
 Dr. G. Eshwarappa, Director of Extension, UAS, Bangalore
 Prof. U.V. Sulladmath, Former Prof. and Head, Department of Horticulture, UAS, Bangalore
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 Shri Thakur Uday Singh, Chairman and Managing Director, NSPL., Bangalore
 Dr. K. R. Dhiman, Vice Chancellor, Dr. Y. S. Parmar University of Horticulture and Forestry, Solan
 Dr. Dr. S. B. Dandin, Special Officer, University of Horticultural Sciences, Bagalkot, Karnataka

International

Prof. Charles V. Hall, USA
 Prof. Jules Janick, USA
 Prof. Daniel J. Cantliffe, USA
 Dr. Mohmoud Solh, Syria
 Dr. William Dar, ICRISAT, New Zealand
 Dr. Don Keatinge, AVRDC, Taiwan
 Ms. Jaenicke Hanna, ICUC, Colombo
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 Dr. Bijoyendra Nath, USA
 Prof. Acram Taji, Australia
 Dr. Jaos Silva Dias, Portugal
 Dr. Gora Beye, Senegal
 Dr. Usha Palaniswamy, USA

Registration Fee

India		
	Fee in Indian Rupees	Late fee Indian Rupees
Corporate	10000	10500
Institute	6000	6500
Individual Profession	2500	3000
Student	1000	1200
PNASF/UAS/ VEGINET	1500	2000
Accompanying Person	1500	2000
Abroad		
	Fee in US Dollar	Late fee US Dollar
Corporate	800	850
Institute	600	650
Individual Profession	500	550
Student	200	225
PNASF/VEGINET	300	350
Accompanying Person	150	175

Mode of Payment

The registration fees are to be paid by Cheque, Demand Draft or Wire Transfer, drawn in the favour of Dr. Prem Nath Agricultural Science Foundation-A/c. No. S. B. 37688 and payable at Canara Bank, Vyalikaval, Bangalore-560 003, India. Money orders will not be accepted.

The registration fee will cover the cost of registration materials, participation in all scientific session and cultural programmes, lunch and refreshment during the Conference and a copy of the proceedings of the Conference.

All details on the conference will be made available on the Website: www.pnasf.org.news&events.htm where second announcement will appear during January, 2009.

Please indicate are you interested in:

- Attending the conference
- Presenting a paper-oral/poster
- Theme area
- Attending professional tour
- Attending social events
- Trade exhibitions
- Sponsorship to the conference

Please send all correspondence to

The Chairperson,
 Organizing Committee,
 International Conference on Horticulture (ICH-2009),
 Dr. Prem Nath Agricultural Science Foundation,
 No.9, 1st Cross, 1st Main, 1st Block, Rajmahal Vilas Extension,
 2nd Stage, Bangalore 560 094, Karnataka State, India.
 Tel No.: +91-80-2341 5188 Fax No.: +91- 80- 2351 1555
 Email: pnasf@vsnl.net; pnasf@rediffmail.com
 Website: www.pnasf.org/news&events.htm

SOCIAL COMMITMENT / INFORMATION DISSEMINATION

Noble Contribution to the PNASF



Mr. Ashish Ahuja

During his visit to the USA during the month of August, 2008, Dr. Prem Nath was presented with a cheque of US \$ 2000/- (US Dollar Two Thousand) only by Mr. Ashish Ahuja of Chicago to augment the activities of the PNASF in enhancing the capacity of knowledge and income generation among the needy urban and rural communities. The PNASF proposes to utilize this fund in

promoting the activities of the PNASF project- PNASF/MHPS-2005/ Biological Sciences and Nutrition for the benefit of the school children in enhancing the knowledge on nutrition security.

It is noted that this contribution has come from the Ahuja family where his father Dr. K. G. Ahuja had already contributed to the ongoing Smt. Deviki Devi Ahuja Scholarship for the benefit of the post-graduate students in horticulture.

The PNASF extends grateful thanks to Mr. Ashish Ahuja for his noble contribution.

GOLD MEDAL PNASF/IIHR/28/2006

The PNASF is pleased to announce the Gold Medal Award to Dr. T. Janakiram, Principal Scientist, Indian Institute of Horticultural Research, Bangalore for his outstanding contribution in Horticulture towards Food and Nutritional Security. This is the 2nd Gold Medal being awarded by PNASF to IIHR Scientists for their outstanding contribution in Horticulture towards Food and Nutritional Security. The award will be presented during the forth coming International Conference on Horticulture(ICH-2009), to be held at Bangalore during Nov 9-12, 2009

GOLD MEDAL PNASF/UAS/2001

The PNASF Gold Medal was awarded to the Ph.D student Mr. Jaiprakashnaraya R. P. and Ms. Pankaja N.S. for highest grade point average at the University of Agricultural Sciences, Bangalore. The award was presented during the University's 42nd Convocation held on 28th April, 2008.

PNASF/DHARMSHEELA NATH SCHOLARSHIP/2006

On the recommendation of the University of Agricultural Sciences (UAS), Bangalore, Ms. Shilpa Yatnatti, a student of M. Sc. (Food and Nutrition) at UAS was awarded the PNASF/Dharmshela Nath Scholarship for two years. Ms. Shilpa will continue assisting the project PNASF/MHPS/2005- Biological Science and Nutrition Project for school children.

theme 'India and global food security' to be published and was submitted during June 2008.

- ❖ The mission and activities of the PNASF appeared in the World Bank Publication-Perspectives on Development, Fall,2008, page 71.
- ❖ The PNASF publication entitled "Vegetable Crops : Improvement and Production" authored by Prem Nath, V.K. Srivastava, O.P. Dutta and K.R.M. Swamy was listed in the New Titles of the ISHS Chronica Horticulture Vol.48, No.4, page 24 (2008).
- ❖ An article entitled, "Improving Indian Agriculture Using New Generation Sciences" by Dr. Prem Nath was invited for publication in the Souvenir issue of the Indian Agriculturist, Kolkatta.
- ❖ The PNASF and VEGINET sponsored International Conference on Horticulture (ICH-2009) was listed in the section Courses and Meetings of the Chronica Horticulturae Vol. 48. No. 3 July, 2008
- ❖ The lead paper entitled, " Vegetables for food and nutrition security" by Dr. Prem Nath was published in the Book of Abstracts, ISHS IV Balkan Symposium on Vegetables and Potatoes held during September 9-12, 2008, Plovdiv, Bulgaria, Page No. 19.

Publications of PNASF

Publications on shelves

Description	India (In Rs.)	Foreign (In US \$)
** Book – Vegetable Crops : Improvement and Production (Pages :398) 2007	125.00 + Rs. 55.00 (extra postage charge) – PB type	25.00 including postage
* Book – Food Security and Vegetables- A Global Perspective (Pages:437) 2004	250.00 + postage extra - PB type 500.00+ postage extra – HB type	50.00 including postage for both PB and HB type
* ICV-2002 Proceedings – CD (Pages:931) 2003	100.00 including inland postage	10.00 including foreign postage
* VEGINET Booklet (Pages: 22) 2003	25.00 including postage	5.00
* ICV-2002 Abstract Book- (Pages:445) 2002	600.00 including inland postage	35.00 including foreign postage
* ICV -2002 Souvenir (Pages:124) 2002	575.00 including inland postage	25.00 including foreign postage

INFORMATION DISSEMINATION

Publications

- ❖ An article entitled "Cucurbits and its values" authored by Dr. Prem Nath was invited by the Hindu Newspaper for its seventeenth, edition of 'Survey of Indian Agriculture with the

INFORMATION DISSEMINATION

* 35% discount given to PNASF and VEGINET members, Professors, Students and Libraries.

**15% discount to PNASF and VEGINET members and libraries.

How to order?

Making wire transfer or sending Bank Demand Draft or Cheque in favour of Dr. Prem Nath Agricultural Science Foundation, A/C No.: 37688, payable at Canara Bank, Vyalikaval, Bangalore – 560 003, India.

Plans on hand

While the ongoing activities will continue, the PNASF proposes

to undertake new programmes and activities;

- ↳ Participation in conferences
 - Organizing the International Conference on Horticulture (ICH-2009) scheduled to be held on November 9-12, 2009 in Bangalore, India.
 - Host the VEGINET Secretariat ;
- ↳ 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., ;

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. Both perfect bound and hardbound copies of the latest publication 'Food Security and Vegetables – A Global Perspective' are available on sale. Order also be placed through the website www.pnasf.org

Contribution/Membership

Registration/membership/contribution either to PNASF or to VEGINET or to both may be obtained by completing the attached form and by paying the requisite fee.



Website : *The detailed activities of the PNASF are accessible on www.pnasf.org*

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