Dr. Prem Nath Agricultural Science Foundation
PNASF

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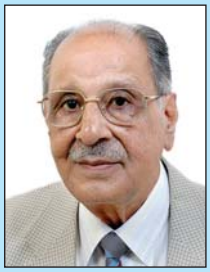
Chairman, PNASF Speaks



With the dawn of the new millennium, we had envisaged to mitigate hunger and malnutrition and set the Millennium Development Goals (MDGs) in place to augment overall human development including food and nutrition security. But the latest MDGs report provides not an encouraging scenario where several of the developing nations would not be able to halve the population of hunger and malnutrition by 2015. As for India, it may take about 50 years, the message indicated.

Most of the developing nations had pledged to halve the population of hunger and malnutrition during the World Food Summit held during in 1996 at FAO, Rome and several of these nations had made significant progress in setting its priorities and in developing their food security plans and programmes and have shown progress in this regard. In this effort during last decades, various developing nations have faced some challenges and issues which need to be addressed appropriately to achieve the goals. Some of these challenges and issues related to food and nutrition security as identified demand attention, which may be mentioned as below.

Food Security vs. Nutrition Security: *In the last decades most of the efforts were made to augment food security with the philosophy and approach that everyone should have at least two meals a day but the malnutrition and undernutrition made a heavy toll on millions of population. Hence, food security programmes can not be separated from nutrition security programmes and activities.*

Food vs. Availability: *The continued efforts are required to increase food production for which the strong backup of research, and inputs and development programme is essential. There is significant demand of advanced technology and provision of timely inputs across the developing world.*

Food Availability vs. Accessability: *The food security can not be achieved by increased production only but the people should have access to food. Presently, one billion people are suffering from hunger and malnutrition and they have no access to food. In the gamut of food security, economic access is the dominating factor. The evening capacity of these affected people needs to be improved with appropriate policy and programmes in place.*

Technology Development vs. Technology Availability: *There is continued demand on improved agricultural technology which needs to be met with modern research and improved and innovative tools. Some countries have attained more in research system and approach than others which they can share with each other and at the sametime continue improving their national technologies. But the major problem facing the developing nation is making available the technology to farmers. All the technology available with the research centres are not available to the beneficiaries, i.e. farmers.*

Food vs. Distribution: *The increased production of food is not the ultimate aim in food security but how and how much it is made available to needy people? In most of the developing countries, the Public Distribution System (PDS) demands improvement. In India, even with the adequate amount of food in stock, 270 million people have no food and Rs. 60000/- Crore worth food is wasted annually because of improper storage. The improved PDS and proper storage facilities will augment food security in India.*

Food Security vs. Household Security: *The food security of the affected people is difficult to be attain unless the household economic security is improved. The Government appropriate policy and effective programmes on employment and income generation among the 270 million affected people of the nation will ensure food security.*

Small vs. Large Farmers: *In the developing world about 75 percent of the farmers have land holdings less than two hectares. Agricultural policies and programmes of most of these nations do not address appropriately the need of these small farmers who need assistance on production inputs including simple technology, credit facilities, and transport and market access. The present policies and programmes seem to favor largely large farmers.*

Subsistence vs. Commercial Farming: *The traditional subsistence farming which has ensured food security of the rural masses of the developing world need not to be protected only but favoured with appropriate policy and programmes against the emerging commercial farming oriented towards export. The commercial farming should develop without effecting adversely the subsistence farming.*

Rural vs. Urban Population: *The planners have to make a serious consideration of the increased migration of rural population to the urban areas which would change the development face of a nation significantly. The projected international report made earlier that more than 50% of the people will reside in urban areas within few decades is becoming true. Who will plough the rural land? Who will feed the urban people?*

We would appreciate the efforts of the Government of India in formulating Food Security Policy and Plans which should consider above issues to mitigate food insecurity in India.

(Prem Nath)

EVENTS

Senior Scientific Councillors (SSC)

The Board of Trustees (BOT) of the PNASF is pleased to nominate the Senior Scientific Councillors with life-long experience and contribution in agriculture and allied sciences. On behalf of the Board of Trustees and the PNASF family, the Chairman, Dr. Prem Nath is pleased to welcome the following eminent scientists as honorary Senior Scientific Councillors of the PNASF.

1. Dr. V. L. Chopra, former Member of Planning Commission, Government of India; former Director General, Indian Council of Agricultural Research (ICAR), New Delhi; former Professor of Genetics, Indian Agricultural Research Institute (IARI), New Delhi.
2. Dr. Kirti Singh, former Chairman, Agricultural Scientists Recruitment Board (ASRB), ICAR, New Delhi; former Vice-Chancellor, Himachal Pradesh Agricultural University, Palampur; former Professor of Vegetable Crops, Haryana Agricultural University, Hissar; Chairman, World Noni Research Foundation, Chennai.
3. Dr. S. Bisalaiah, former Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore; former Chairman, Karnataka Agriculture Price Commission; Professor of Agriculture Economics, UAS, Bangalore.
4. Dr. R. Dwarakinath, former Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore; former Chairman, Karnataka Agricultural Commission; former Director of

Agriculture, Government of Karnataka, Bangalore; Chairman, AME Foundation, Bangalore.

5. Dr. G.K. Veeresh, former Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore; former Member, Karnataka Agriculture Commission; former Professor of Entomology, UAS, Bangalore.
6. Padmashree Dr. M. Mahadevappa, former Vice Chancellor, University of Agricultural Sciences (UAS), Dharwad; former Chairman, Agricultural Scientists Recruitment Board, New Delhi and former Professor of Genetics and Plant Breeding, UAS, Dharwad.
7. Dr. P.G. Chengappa, former Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore; former Visiting Scientist, IRRI, Manila; Professor of Agricultural Marketing and Corporation, UAS, Bangalore.
8. Prof. R.S. Deshpande, Director, Institute of Social and Economic Change(ISEC), Bangalore; former Professor of Economics, ISEC, Bangalore.
9. Dr. Vishnu Swarup, former Coordinator, All India Vegetable Improvement Coordinated Project, ICAR, New Delhi; former FAO Expert on Vegetables, Nigeria; Outstanding National Vegetable Breeder; Director, Indo American Hybrid Seeds, New Delhi.
10. Dr. Anupam Varma, former ICAR National Professor on Virology; former FAO Expert on Virology in Nigeria; former Professor of Virology, IARI, New Delhi; INSA Senior Scientist, IARI, New Delhi.
11. Prof. U.V. Sulladmath, former Professor and Head, Department of Horticulture, University of Agricultural Sciences (UAS), Bangalore; Well-known Scientist in Horticulture.
12. Dr. C.P.A. Iyer, former Director, Central Institute of Horticulture, Lucknow; former FAO Expert on Fruits, Bangladesh; Well-known fruit crops breeder.

For detailed curriculum vitae please see under *Information Dissemination.*

Visit to Rural Bio-Resource Complex Project in Doddaballapur

Dr. Prem Nath visited the Rural Bio-Resource Complex Project (RBRC) in Tubagere Hobli of Doddaballapura Taluk, as a guest member of the team led by Dr. K. Narayana Gowda, Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore with H. E. the Governor of Karnataka, Dr. Hans Raj Bhardwaj as the Chief Guest on June 18, 2011.

Sri. Sadananda's Rose Garden in Tubagere Hobli of Doddaballapura Taluk in Bangalore Rural District

The RBRC project funded by the Department of Biotechnology, Government of India and implemented by the University of Agricultural Sciences, Bangalore covering 8340 farming families spread over in 75 villages has brought about significant improvement in the productivity resulting in enhanced income and employment generation, over a period of 5 years of its operation. It was reported that special features of the project included;

- Adoption of integrated farming / whole farm development
- Addressing end to end issues on all technological interventions
- Encouraging adoption of profitable technologies
- Ensuring credible, dependable and timely information to farmers
- Providing need based critical inputs in time at easy reach.
- Providing better market options, market linkage intelligence
- Promoting formation of Commodity Based Associations.
- Special emphasis for seed and planting material production.

The visit to progressive grower's fields of rose, sweet pepper, maize, areca nut and poultry, home gas plant, farm pond and fish culture, and supporting community infra-structure of Rural Bio-fuel Extraction Plant, Bakery, Fruit and Vegetable market, and protected nursery were useful which were beneficial to the farming community. The formation of Commodity Associations encouraged development in production, processing and marketing of the produce.

The Chief Guest, H.E. Dr. Hans Raj Bhardwaj and the visiting team appreciated the efforts of farmers and its associations and noted the significant achievements made for the prosperity of the participating communities, guided by the UAS.

Lecture at Bangalore International Centre, Bangalore

Dr. Prem Nath delivered a Guest Lecture on "Food Security - A Dilemma" at the Lecture Hall of The Energy and Resources Institute (TERI), Bangalore on May 06, 2011 at 1830 hrs on the invitation by the Director, Bangalore International Centre (BIC), Domluru II, Bengaluru . It was attended by the members of BIC and the invited guests. The event was chaired by Dr. C.P.A. Iyer, former Director of the Central Institute of Tropical Horticulture, ICAR. Delivering the lecture, Dr. Prem Nath enumerated the rising challenges and important issues

L-R: Dr. Prem Nath, Dr. C.P.A.Iyer and Mr. P.R. Dasgupta

involved in providing food and nutrition security and also the role to be played by policy makers and governmental body to augment the same, followed by fruitful discussions among the members attending the event. A memento was presented to Dr. Prem Nath by the President of the BIC, Dr. A. Ramachandran. Mr. P.R. Dasgupta, Director, BIC, extended vote of thanks. Among the PNASF members who participated were Dr. C.P.A. Iyer, Mr. V.K. Abraham, Dr. K.R.M. Swamy and Ms. Vanita N. Shetty. The highlight of the talk is given below;

Food Security-A Dilemma
By Dr. Prem Nath

Today the world produces adequate food for everyone but the unequal distribution has created a gap between the countries who produce food more than they consume, and those countries with deficit production.

Rising Challenges

Some of the rising challenges facing the food security are; fatigue on the soil because of heavy fertilization and heavy cropping, shortage of water and indiscriminate use, over-use of pesticides creating pollution, imbalance between agriculture and horticulture production and natural resources; post-harvest losses upto about 30%; subsistence farming for food security vs. commercial farming for export; and health improvement. Lack of priorities and appropriate policies and programmes.

Food Security

Food security is attained when all people, at all times, have the physical and economic access to sufficiently safe and nutritious food to be healthy and active (FAO). The food security is difficult to be attained when poverty prevailed in the households. Among other factors access to food remained a dominating force in the frame of food security, where economic accessibility played an important role (Nath, 2002). Food insecurity and malnutrition will persist in 2020 and beyond. (IFPRI, 1999). 334 million children in developing countries are malnourished. One billion people across the globe are suffering from hunger and malnutrition; about 640 million in Asia and about 230 million in India (FAO, 2009). More than 70% people engaged in agriculture in developing countries. (World Bank, 2008). No one would dream that **370 million** citizens of a fast growing economy like India could go bed hungry. India has the dubious distinction of ranking 94 among 119 countries in the Global Hunger Index. This is all the more ironical in a country with a surplus stock of food grain, and is clearly result of skewed government policies and vision. Grain worth Rs. 60,000/- crore is destroyed annually due to inadequate storage facility. Agricultural production and research systems will be challenged to keep abreast of changing dietary preferences in coming years.

Constraints in Food Production and Utilization

Lack of Governance- lack of priorities, insufficient funding, inadequate infrastructure, lack of efficient market network both domestic and export; inefficient database on socio - economic studies, lack of human resources; **Technology Development**- narrow spectrum of improved varieties, lack of seeds quality standards, lack of export-quality products, non-exploitation of indigenous technology, lack of integrated crop management (nutrient, protection, irrigation), natural resource constraints in production system, lack of sanitary and phyto-sanitary standards (*Codex Allimantarius*). The food security of humans can not be attained without plants and plants security can not be achieved without soil and water, and it is impossible to keep secured soil and water without economics of management (Nath, 2010); **Technology Transfer**- non-efficient-system and transfer, lack of information dissemination and management; **Post Harvest handling-** not efficient causing losses upto 30%; and **Policy Development and Programmes on Food and Nutrition Security-**Lack of appropriate policy and programmes.

Dilemma

The policy makers and planners have to augment efforts to mitigate the **dilemma** arising out of relevant emerging issues like; Food Security vs. Nutrition Security, Policy vs. Beneficiaries, Subsistence vs. Commercial farming, Technology Development vs. Technology Availability, Food Availability vs. Accessability, Rural vs. Urban Population, and Food Security vs. Household Income.

A serious attempt by governments in articulating the policies and programmes in agriculture, food, nutrition, health security and employment and income generation will go longway in overcoming insecurities.

Participation in the ISHS International Symposium in Indonesia

On invitation by the organizers the PNASF represented by Dr. Prem Nath, participated in the ISHS International Symposium on Sustainable Vegetable Production in South-East Asia held March 14-17, 2011 at the Universitas Kristen Satya Wacana (UKSW) in Salatiga, Central Java, Indonesia. The symposium was organized by the Ghent University, Belgium; Indonesian Kristen Satya Wacana, Salatiga; and Gajah Mada University, Yogyakarta, Indonesia. More than 215 participants from about 18 countries of Asia, Middle East, Europe and USA participated in the symposium. It covered the sessions on Farming systems - rotations, Nutrient management - fertilization, Crop production, Crop protection, Plant breeding and Alternative Vegetable Production Systems, soil quality and carbon footprint. Both the oral and poster papers were presented.

Participants of the Symposium

The key note paper entitled "Sustainable vegetable production in Vietnam – prospects and constraints" was presented by Prof. H. Böhme, Germany. Dr. Prem Nath presented the first lead paper

entitled "Growing role of vegetables on livelihood security". The paper was well received and the abstract published in the Abstract Book is reproduced below;

1st International ISHS Symposium on
"Sustainable Vegetable Production in South East Asia,
13-17 March 2011

ORAL PRESENTATION – SECTION 1
GROWING ROLE OF VEGETABLES ON LIVELIHOOD SECURITY

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Abstract

The present millennium has noticed a remarkable change in every walk of life including high demand on quality and quantity of food. The horticulture is emerging as the second line of defence in the food domain whereas cereals continue to maintain its first place. The growing importance of horticulture including vegetables lies in its strong support to food security, as a major contributor to nutrition security, its role on health improvement and as an important source of employment and income generation. The International Conference on Vegetables (ICV-2002) held during November 2002 in Bangalore, India has already recognized the growing importance of vegetables on food and nutrition security. The FAO and WHO workshop held at WHO Kobe Centre, Kobe, Japan on September 1 - 3, 2004 and its report (2005) has recognized the role of fruits and vegetables in preventing non-communicable diseases and overall health improvement. The International Conference on Horticulture (ICH-2009) held during November 9-12, 2009 in Bangalore has already amplified the role of horticulture including vegetables on livelihood security of the people in the developing world. Among the horticultural crops, vegetables play major role because of its large number of crops and its nutritive values, nutraceutical values, high productivity per unit area and per unit time and its employment and income generation potential. The sustainable vegetable production remains the solution to meet the growing demand. The above mentioned issues will be discussed in the presentation of the paper during the ISHS International Symposium on Sustainable Vegetable Production in South-East Asia during March 14-17, 2011, Salatiga, Indonesia.

Dr. Prem Nath was invited to Chair the Technical Session on Crop Production. The Co-chairman was Prof. Baunbang d. Kertoneogoro. Dr. Nath took opportunity to make two announcements viz (a) on new PNASF publication "Horticulture and Livelihood Security", and (2) upcoming Regional Symposium-High Value Vegetables in Southeast Asia: Production, Supply and Demand (HIVEGSEA-2012) scheduled January 24-26, 2012 in Chiang Mai, Thailand. The announcement on HIVEGSEA-2012 and VEGINET and PNASF Brochures were distributed among the members. Further, Dr. Prem Nath held personal discussion with the participants of Australia, New Zealand, Netherlands, Belgium, China, Indonesia, Saudi Arabia and Nigeria who were willing to participate in PNASF and VEGINET activities.

Visit to Grower's Field in Java, Indonesia

On March 15, 2011 Dr. Prem Nath held a detailed discussion with Dr. Yuniarti, an Executive Member of VEGINET and his colleague Dr. Rofik Sinung Basuki. Dr. Yuniarti and Dr. Rofik briefed about their ongoing activities in Eastern Java. Among other crops they emphasized on improving the quality and production of potato and shallot in the region and invited assistance on improved technology and availability of improved seeds. Dr. Nath agreed to connect Dr. Yuniarti with Central Potato Research Institute, Simla and AVRDC Southeast Asia Office, Bangkok.


Dr. Prem Nath and Ms. Yuniarti, VEGINET Executive Council Member

On March 17, 2011, along with the participants of VEGSEA 2011, Dr. Nath visited vegetable fields near Kopeng area. The places of visit included vegetable market and vegetable nursery in Ngablak su-district of Magelang Regency; vegetable production sites on the shops of Mount Merbabu and; Agrosatya Learning and Tourism Center of Agriculture Faculty, UKSW in Salaram Village. The hilly region with terrace gardening was full of cabbage, chilies, tobacco, bean and other vegetables crops. Many of the individual growers had their own nurseries on benches in small plastic coverings, and some of the commercial nursery growers raised the vegetable seedlings particularly cabbage, chillies and tobacco on benches in trays under plastic houses and one nursery sold about 100,000 seedlings per week each crop. Locally available bamboos were used intensively in building the nursery structures. The individual/groups visited the nursery houses and collected the well-grown seedling trays. The vegetables available in the local markets were cabbage, chillies, beans, pumpkin, chayote, water spinach and others.

On March 18, 2011 Dr. Nath accompanied by Dr. Yuniarti visited dragon fruit and vegetable fields in the suburbs of Jogjakarta, Java. The commonly available dragon fruits were;

- *Hylocereus undatus* (red pitaya) red or pink skinned fruit with white flesh, commonly available;
- *Hylocereus costaricensis* (Costa Rica pitaya, often called *H. polyrhizus*) red or pink skinned fruit with red flesh

Dragon Fruit is recognized as a fascinating new nutritive fruit and is cultivated commercially in Indonesia, Vietnam and Thailand and marketed in different regions of the world. India with favorable agro-climate can introduce and take lead on production of this crop.


Dragon Fruit Plantation

It is herbaceous plant looking like cactus but no thorns anywhere either on the plant or fruit. Propagated asexually by stem cutting, it starts bearing in about

9 months and near sea beach area of Jogjakarta it bears fruits throughout the year. It grows on sandy soil with good farm yard manure and hardly disease or pest were observed. The economic productive life of plant is about 15 years. It has good transport and storage capacity. The fruit is consumed fresh or as juice. It is said to have high nutritive and medicinal values. Karnataka, Goa and Kerala could test and introduce this crop. By the way, the imported dragon fruits are available on high price in markets of Bangalore, Delhi and Mumbai and other places, in USA and Europe.

In the wholesale fruit market in Jogjakarta, both the locally grown and imported fruits were available in plenty. The locally grown fruits available were avocado, orange, papaya, pomello, watermelon, muskmelon, mango, anona, and others, while the imported ones from China and Thailand were apple, citrus, longon and others.

Visit to Vice-Chancellor, UAS, Bangalore

On March 03, 2011, Dr. Prem Nath visited Dr. K. Narayana Gowda, Vice Chancellor, University of Agricultural Sciences, GKVK Campus, Bangalore and held discussion with him with regard to the implementation of the PNASF-Dharmasheela Nath Fellowship instituted for some years now for a female post-graduate student in the Department of Food, Science and Nutrition. Since PNASF/Smt. Devki Devi Ahuja Fellowship allocated to post graduate students in horticulture only, it has been now transferred to the University of Horticultural Science, Bagalkot.

The PNASF has been implementing Field Project on Biological Science and Nutrition for the children for some years in Government and private schools in Bangalore. The two scholars of both the PNASF Fellows mentioned above have been undertaking their thesis work on the problems related to the project under the guidance of the UAS professors actively assisting the project activities. Hence, the UAS has been involved indirectly or directly in the implementation of the project.

Now that the PNASF plans to extend the activities of the project in other schools in Bangalore, Dr. Nath proposed that the High School managed by the UAS at the Hebbal Campus may be adopted for the benefit of school children. Dr. Narayana Gowda principally agreed with the proposal and wished that these activities may also be extended to other schools. Dr. H.B. Shivaleela, Professor and Head of the Department of Food, Science and Nutrition who participated in the meeting supported the idea and was asked to make a follow up in initiating this project activities. Dr. Narayana Gowda was pleased with the proposal and emphasized on the availability of good quality seeds to home gardens and on press meet periodically to highlight the success of the project which should be a model to other schools. The project will be implemented and technically guided by both PNASF and UAS and financed by the PNASF. The project is implemented under the guidance of the PNASF project coordinator Dr. B.S. Prabhakar.

Participation in the XXIX Group Meeting of the ICAR/AICRP on Vegetable Crops

Dr. Prem Nath was invited by the Indian Council of Agricultural Research (ICAR) to participate in the XXIX Group Meeting of the ICAR All India Coordinated Research Project-Vegetable Crops (AICRPV) held during January 27-30, 2011 at Junagadh Agricultural University (JAU), Junagadh, Gujarat.

Participants of the AICRPV at JAU, Junagadh

The inaugural function was chaired by the Hon. Minister of State for Agriculture Shri Kanubhai Bhalala with Dr. H.P. Singh, Deputy Director General (Hort.), ICAR as the Chief Guest and Dr. N.C. Patel, Vice-Chancellor, JAU as the Co-chairman. Dr. Singh highlighted the growing importance of vegetables and advised the participants to address the emerging issues in vegetable technology including climate change and take steps to augment high quality production. He emphasized on developing sound vegetable research programme on national basis. Shri Bhalala spoke of the importance of agriculture in Saurashtra Region of Gujarat. Dr. Patel illustrated research and developmental steps taken up by JAU in assisting the farmers.

The meeting consisted of the following technical sessions where detailed discussion were held;

I. General Session,
II. Collection Evaluation andconservation of Germplasm,
III. Vegetable Production,
IV. Varietals Trials,
V. Physiology, Biochemistry and Processing,
VI. Hybrid Trials,
VII. Insect Pest Management,
VIII. Resistant Varietals Trials,
IX. Seed Production,
X. Breeder Seed Production and Price Fixation,
XI. Public and Private Interface,
XII. Finalization of the Technical Programme.

The Annual Report of 2009-2010 and 2010-2011 was presented and discussed and the technical programme of 2011-2012 was finalized.

Dr. Prem Nath was invited to Chair the session on Resistance Varietals Trials where Dr. D.P. Singh Co-chaired the session. Dr. A. Chattopadhyay and Dr. S.K. Sanwal served as the Rapporteurs. In his Chairman's remark, Dr. Nath suggested that ICAR should (a) identify the major diseases and insect pests of economic importance, and (b) develop resistant varieties to combat these pests.

The Plenary and Concluding Session was chaired by Dr. U. Srivastava ADG/ICAR with Dr. N.C. Patel, VC, JAU as the Chief Guest and Dr. Prem Nath, Chairman, PNASF as the Guest of Honor. Dr. B. Singh, Project Coordinator, AICRP concluded the recommendations. During the concluding session, Dr. Nath was invited by the Chairman to provide his remark and his recommendations derived from the discussions in various sessions were as follows;

- Any technology developed for the farmer must have cost-benefit ratio determined;

- Any data generated on field trials should contain relevant soil and weather conditions;
- It is incumbent on the scientist conducting the trials to follow the guidelines approved by the AICRP;
- Once the trial is approved for a centre it must be carried through; situations like non-availability of seeds or staff etc. should not happen; both the scientist and project coordinator cell are equally committed to undertake the trials as planned;
- Correct reporting of result is as important as conducting the field trials;
- Breeding programme be developed on high nutrition, nutraceutical values, insect and nematode resistance, disease resistance and abiotic stress;
- ICAR should streamline the procedure for inclusion of commercial varieties in field trials developed by the private sector.

Dr. Nath advised that a sound technical programme should be developed using the modern technical tools to address the emerging issues in the vegetables sector in India in order to be competitive in both national and world markets. The Chairman, Dr. Srivastava, appealed to the participants to undertake the fields trials approved in the manner it has been guidelined. The Co-chairman, Dr. B. Singh concluded the meeting by extending vote of thanks to the dignitaries, invitees, participants and the host staff of the JAU.

Visit to Junagadh Agricultural University, Gujarat

On January 28, 2011 Dr. Prem Nath visited Junagadh Agricultural University Campus at Junagadh and held detailed discussion with the Vice-Chancellor, Dr. N.C. Patel. Dr. Patel briefed Dr. Nath of the organizational set-up, staff and infrastructure of the university and provided him with relevant publications. The VC's office had electronic connectivity with televised system to all offices, departments, and colleges. The correspondence was done online and the budget, request for expenditure and its approval were done online. The new laboratories with modern equipment had a common facility accessible to all departments, staff and students and farmers and testing of all samples were done under the same roof. The guest houses adequate in number were well-designed and equipped.

The major crops dealt by the university and grown by the farmers in the Sourastra Region were cotton, wheat, sesame, and groundnut, whereas, vegetable and fruits were graining importance. During the subsequent visit to farmer's field of wheat and cotton, the standing crops were excellent in growth and fruiting comparable to Punjab farmers. The onion and sugar beet crops in the field were performing very well with no weed and major diseases. The experimental plots of vegetable crops like brinjal, dolicos bean had a good number of germplasm and varietals trials.

Commonly, the scientists and extension officials visited the farmers along with the officials of the state department of agriculture. Annually, officials of all the departments including water and electricity and the university visited the farmers in villages to augment overall rural development. The self-contained mobile van equipped with television/DVD, mike, generator etc. adopted by the Extension Department of the university, visited farmers in remote areas during night hours after the farmers have taken their dinner. The farmers were provided with printed telephone directory of all specialists of crops and domestic animals at the university who were accessible and available for advise and visit to the field.

Participation in the ICAR Consultation on Higher Agricultural Education in India

In the present changing and challenging scenario of national and international agriculture, the ICAR decided to review the agriculture university education and formed a national committee to suggest reform and renewal of the higher agricultural education. The said committee had its consultations at its headquarters in New Delhi and subsequently meeting was held in Bengaluru.

On invitation by the Indian Council of Agricultural Research (ICAR), Dr. Prem Nath participated in the Consultative Meeting on Higher Agricultural Education organized by the ICAR, New Delhi on January 19, 2011 at the University of Agricultural Sciences (UAS), Bangalore. The meeting was chaired by the Committee Chairman, Dr. Panjab Singh, former Director General, ICAR and Secretary, DARE, Government of India and the members of the committees were Dr. Arvind Kumar, DDG (Education), ICAR; Dr. P.G. Chengappa, former Vice-Chancellor, UAS, Bengaluru,; Dr. A.K. Mehta, former DDG, ICAR and Dr. P.K. Joshi along with Dr. R.K. Mittal, ADG(Education), ICAR who served as the secretary. During the concluding session, Dr. K. Kasturirangan, Member, Planning Commission, chaired the session. The invitees were the former and present Vice-Chancellors of agriculture, horticulture and veterinary universities and senior university officials of Karnataka plus vegetables of the private sector. Dr. K. Narayana Gowda, Vice-Chancellor, UAS, Bengaluru welcomed the gathering.

The meeting experienced brain-storming sessions whole of the day of January 19, 2011 which expressed experiences of stakeholders in agricultural education and provided valuable contribution in improving the higher agricultural education in the country. The suggestion advanced by Dr. Prem Nath were as follows;

The following suggestions may be considered by the ICAR;

1. Agricultural Education needs to be viewed together for farmers, high school students and university students.
   - ➢ Farmer's school be strengthened by Krishi Vigyana Kendras or local agricultural officials in each district.
   - ➢ High Schools particularly in rural areas should produce agricultural graduates or offer at least some courses in agriculture.
     - ⇨ Vocational Training be encouraged. ICAR should recommend these to states
     - ⇨ Diploma in agriculture be considered.
2. Only those who qualify should go for higher agricultural education
   - ➢ Strict selection of candidates with merit and aptitude.
   - ➢ Wider and better publicity for admission to agricultural universities similar to e.g. medicals, engineering, I/T students.
   - ➢ Regulation to facilitate transfer of credits from one university to any other university in India.
   - ➢ PG students should be allowed to take courses at one university and complete research for completion of degree at another university, if required.
   - ➢ PG Research should address on relevant agricultural problems facing the country, less on academic relevance.
3. Qualified Faculty members at Agricultural Universities.
   - ➢ Strict selection criteria be followed for qualified candidates.

- Vacancies should be open to any national of India and best candidates be selected.
- The professors on board should undertake (a) Refresher courses at Centers of Excellence, (b) sabbatical leave, and/ or (c) exchange programme with other universities in India or abroad.

4. University Curriculum
   - Should include latest in sciences relevant in the present national and global context of food security, nutrition security, climate change etc.
   - ICAR should identify and nominate best authors and assign them to write text and reference books.
   - New disciplines of biotechnology, nano-technology etc. should receive attention.
   - Should consider regional requirement and specializations.
   - Should focus livelihood security, dry and irrigated areas.
   - Simple technology and teaching be developed for small farmers.
   - Research and teaching on organic farming should be strengthened.
5. Approach
   - It should be mandatory for each university to be tied up with Central Research Institutes in the region and vice versa. P.G. students should research at the Research Institutes and scientists of the Institute should teach at the University. Likewise, Professors should research at the Institutes for some period.
   - Centers of Excellence in true sense be established in each region for different disciplines.
   - The tie-up of Indian Agricultural Universities with the lead universities abroad for exchange of Professors be re-introduced as was done during 1960's e.g. US and India through Rockefeller Foundation/USAID.
   - ICAR should develop a network to connect all agricultural universities in India, which should facilitate transfer of success stories and relevant information from one state to other.
   - Each faculty member be involved in Teaching/Research/ Extension/Development. It should be integrated and not on time slot basis.
   - Teaching and technology development should focus on both small and large farmers.
   - The retired outstanding Scientists and Professors available to volunteer be utilized either in education or research.
   - Facilities of Laboratory and field be enhanced to ensure better teaching.
   - ICAR should identify Professional Societies in different subjects, and assist them (by financing and monitoring) in organizing the annual conference and depute professors and scientists to present their best papers.
   - Land-grant-pattern of Universities be reviewed and new model be developed in the present context.

The committee agreed to consider the suggestions provided by the consulting members.

PNASF attends Inaugural Session of the Training Programme at IIHM, Bengaluru

On invitation by the organizers, Dr. Prem Nath, Chairman, PNASF presided over the inaugural session of the Training Programme on Integrated Nutrient Management organized by the International Institute of Horticulture Management (IIHM), ECC Campus, Bengaluru, on January 10, 2011 at 10.00 a.m. Dr. K. Narayanagowda, Vice-Chancellor, University of Agricultural Sciences (UAS), Bengaluru, was the *Chief Guest*.

Dr. Narayanagowda gave a comprehensive talk on the importance of agriculture and contribution of nutrient management in promoting agricultural production with practical examples of success in various parts of Karnataka. The contribution of the University of Agricultural Sciences (UAS), Bengaluru, in this regard was highlighted and the message of positive mind set conveyed.

In his brief presidential address, Dr. Prem Nath commended the efforts of Ecumenical Christian Centre (ECC), in undertaking activities demonstrating no barrier of religion, cast and region for the benefit of humankind and the subject on 'food' with no such barriers was befitting for discussion on this occasion. He further stated that during his professional career across the globe, he observed differences in language, religion and community but one thing was common that all farmers were growing 'food' for their families, neighbours and for communities near and far. Again, a small write-up in front of the auditorium indicated "you enjoy beautiful lilies, but you should know how to grow?". To-day's event was appropriate to the above statement where we had all gathered to know how to grow plants.

Rev. Dr. Mani Chacko, Director IIHM and ECC welcomed the invitees, resource persons and participants and Rev. Paul Singh extended vote of thanks to them. Mr. V.K. Abraham, Dean, IIHM, introduced the dignitaries on the dais and explained the activities and extent of training programmes. About 25 professional officers from public and private sectors including subject matter specialists from Krishi Vigyan Kendras from Karnataka and other states participated.

RESEARCH AND DEVELOPMENT SUPPORT

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

The PNASF team visited the above project at ID Halli, Madhugiri Taluk. Tumkur District on February 18, 2011. The team consisted of Dr. O.P.Dutta, Dr. K.R.M.Swamy, Dr. Prem Nath, Mr. P.B.Gaddagimath and Ms. Vanita N. Shetty at the premises of the M/s Namadhari Agro Fresh Private Limited, I.D. Halli. The objective was to review the progress and process of implementation of the project.

Dr. Prem Nath and other members of the PNASF discussing with beneficiaries.

PNASF Members along with beneficiaries of the Project

On arrival, a detailed discussion was held with all the beneficiaries present along with the officials involved in the operation of the present.

1) Progress of the project was reviewed by asking questions to each beneficiary with regarding to their overall satisfaction in progress of the project, cattle, condition and status, milk production, income earned, bank account opened. The response has been recorded.

2) Since the beneficiaries were satisfied with the progress of the project, they were asked to form the SHG. Smt. Noor Jahan, I.D. Halli was nominated and selected as Pratinidhi 1 and Smt. Laxmidevamma was nominated and selected as Pratinidhi 2 unanimously. All beneficiaries present agreed to it unanimously.

3) The beneficiaries were explained that in addition to milk they could collect free vegetable pulp from Namadhari Agro Fresh Private Limited to use as feed for cows. Also it was noted that some of them were using cow-dung for themselves, some using as manure in their field and some selling it. Some of them had additional income through wages by working somewhere else.

4) On enquiry, it was confirmed that each beneficiary had already opened their individual Saving Bank Account in the local bank. It was agreed unanimously that the SHG be named as Kamadhenu Self Help Group and a single common account in the name of SHG be opened.

5) It was agreed that each beneficiary will contribute Rs. 3/- (Rupees Three Only) per day to the SHG account at least for one year to begin with and can be increased depending on the future income. It was also agreed that each beneficiary must deposit Rs. 3/- (Rupees Three Only) or more per day to their individual account.

6) It was also decided that a Facilitator with the honorarium of Rs. 300/- (Rupees Three Hundred Only) per month be appointed and second hand Luna (Motor Cycle) be purchased by the project for one year to start with and thereafter the cost of Facilitator will be borne out of the savings of the SHG Account. The Facilitator with the clear term of reference will facilitate the work of the SHG and Project under the supervision of Mr. V. Jayapalan and the guidance of the Project coordinator, Dr. O.P. Dutta.

7) In a separate meeting, Mr. C. Ramanjina of I.D. Halli and working with Namadhari Agro Fresh Private Limited was interviewed and selected as the Facilitator to work under Mr. V. Jayapalan and Dr. O.P.Dutta. He was explained of his duties which he will undertake beyond his office hours (Enclosure 4). An advance of Rs. 2,500/- was provided to Mr. V. Jayapalan to procure a second hand Luna Motor Cycle for use by the Facilitator.

8) The Facilitator was assigned to initiate action on opening the SHG account on priority basis, conduct monthly meetings and visit each beneficiary weekly.

9) All beneficiaries agreed to form and strengthen the **Kamadhenu Self Help Group**. The beneficiaries present were; Mrs. Timmakka, Mrs. Ratnamma, Mrs. Norseman (Manjula), Mrs. Norseman (Gangamma), Mrs. Anjanamma (Bhagyamma), Mrs. Laxmidevamma (Chandrakala), Mrs. Norseman (Laxmi), Mrs. Noor Jahan, Mrs. Aswathamma (Gayatri) and Mrs. Ratnamma.

Monitoring of Project Activities

Project: PNASF/SUN/WD-SHG/2005-Promotion of Rural Women Self Help Group through Dairy Development Project made a significant progress during the period under report.

The Project Staff/Facilitator, Mr. C. Ramanjina Reddy, visited each beneficiary on every Sunday and assessed the progress made by each. Presently, out of 10 beneficiaries, 5 were having milching cows, yielding 4-6 ltrs. of milk per day earning Rs.68 to 102/- daily. One beneficiary had replaced the cow with buffalo, yielding 4 ltrs. of milk per day earning Rs.80/- daily. Incase of another beneficiary the mother cow was having 5 months pregnancy hence not yielding any milk. Further, out of 10 beneficiaries, 5 beneficiaries were having one to two female calves of 2-4 years of age, whereas, one beneficiary had sold out the female calf.

Efforts were made to pursue the beneficiaries to open a common bank account under the name of Kamdhenu Self Help Group. Six members having milching animals were ready to join the group and contribute Rs.3/- per day for the common fund. Whereas, those who were not having the milching cow were reluctant to do so .There is a need to have one more round of meeting to sort out the difficulties of the reluctant beneficiaries.

PNASF/UASCS/2011-Biological Science and Nutrition Project for School Children

In its plant to continue and expand the activities of the project entitled "Biological Science and Nutrition Project for the School children", the Chairman PNASF held a meeting with the Vice-Chancellor, University of Agricultural Sciences, Bengaluru with proposal to initiate this project at the UAS Campus School (UASCS), Hebbal on March 03, 2011. Dr. K. Narayana Gowda, agreed principally with the proposal of Dr. Prem Nath in the interest of nutrition security of the school children.

Accordingly, a formal meeting was held between management of PNASF and the management of UASCS at the office of Head Mistress of the school on June 06, 2011. The meeting was attended by Prof. B.C. Shankaralingappa, Secretary, UAS Campus School and Ms. Vanaja Vijaya Raghavan, Head Mistress of the UASCS; Dr. Prem Nath, Chairman, PNASF, Dr. B.S. Prabhakar, Programme Coordinator and Ms. Vanita N. Shetty, Administrative Assistant of the PNASF; Dr. H.B. Shivaleela, Professor and Head of the Food Science and Nutrition Department and Dr. K. Shantha Kumari, Professor, UAS, GKVK, Hebbal, Bengaluru; and Ms. Savitri Byadagi, PNASF Research Fellow (Nutrition).

The Ph.D. Thesis of the Fellow will include the activities of the project. In addition, PNASF Research Fellow (Horticulture) will also work on the activities of the project.

The above meeting decided that the project will be initiated with the field preparation by June 15, 2011 and the classes will be started on July 15, 2011. The project activities will be planned, implemented and monitored by the Project Working Group (PWG) chaired by UASCS and consisting of the members from UASCS, PNASF, UAS and Fellows and will meet whenever required. The project and PWG will be guided by the Project Management Committee (PMC) chaired by the PNASF and consisting of members from PNASF, UAS, UASCS and UHS and will meet once or twice in a year. The PNASF Programme Coordinator on Nutrition for all school projects is Dr. B.S. Prabhakar. This project will be coordinated by Dr. B.S. Prabhakar and Dr. K.R.M. Swamy. The project will have its first phase approved for three years.

The project is considered as a good example of a collaborative project among Dr. P.N. Agricultural Science Foundation (PNASF), Bengaluru; University of Agricultural Sciences (UAS), Bengaluru; UAS Campus School (UASCS), Hebbal, Bengaluru and University of Horticultural Sciences (UHS), Bengaluru utilizing available resources of each institution collectively with one common goal of augmenting the nutrition of school children.

INTERNATIONAL CO-OPERATION

Regional Symposium "High Value Vegetables in Southeast Asia: Production, Supply and Demand", Chiang Mai

Regional Symposium-*High Value Vegetables in Southeast Asia: Production, Supply and Demand (HIVEGSEA-2012),* is being organized by the Thailand Department of Agriculture (DOA), ASEAN-AVRDC Regional Network (AARNET); Vegetable Science International Network, (VEGINET), Bangalore, and Horticultural Science Society of Thailand, in collaboration with other national and international organizations, is scheduled January 24-26, 2012 in Pang Suan Keaw, Chiang Mai, Thailand. For further information please go through website: www.seaveg2012.com

Discounted registration fee: Dr. Grisana Linwattana and Dr. Robert Holmer agreed that participants from the organizing institutions will pay a discounted registration fee of US$ 50/-. This will be applicable to VEGINET members.

Meeting with VEGINET Members in Salatiga, Indonesia

On March 16, 2011, Dr. Prem Nath held a discussion with Executive Members of VEGINET, Prof. Michael Boehme, University of Berlin, Germany and Dr. Yuniarti, Assessment Institute for Agricultural Technology (AIAT) East Java, Malang, Indonesia. Dr. Nath briefed them about the upcoming Regional Symposium-High Value Vegetables in Southeast Asia: Production, Supply and Demand (HIVEGSEA-2012), scheduled January 24-26, 2012 in Pang Suan Keaw, Chiang Mai, Thailand. The members showed interest in the Symposium and appreciated the efforts of VEGINET. Dr. Nath encouraged them to present papers to the symposium. They were provided with the announcement of HIVEGSEA-2012.

Dr. Nath also informed that most of the Executive members of VEGINET have showed their interest in HIVEGSEA-2012 and we should consider having the meeting of the Executive Committee of the VEGINET in the Chiang Mai, Thailand during the symposium.

Dr. Nath highlighted on resource mobilization for the VEGINET and on regular communication among the members.

SOCIAL COMMITMENT

Noble Contribution to the PNASF

The PNASF received a grant from Dr. K.G. Ahuja, PNASF TAC Member from USA, to utilize this fund in promoting the activities of the PNASF project-Biological Sciences and Nutrition for the benefit of the school children in enhancing the knowledge on nutrition security, which is gratefully acknowledged and appreciated by the PNASF Board of Trustees. The PNASF extends grateful thanks to Dr. K.G. Ahuja for his noble contribution.

PNASF/AHUJA/Fellowship/2001

Consequent upon the transfer of horticulture from UAS, Bengaluru to UHS, Bagalkot, the PNASF Fellowship was also transferred accordingly. A discussion was held with Dr. K.M. Indiresh, Professor & PG Co-ordinator, PG Centre, UHS Campus, GKVK, Bangalore and Dr. B.S. Prabhakar, Project Co-ordinator, Bangalore on January 18, 2011 at PNASF office with regard to collaborative project/Smt. Devki Devi Ahuja Fellowship.

Dr. Indiresh was briefed about the Smt. Devki Devi Ahuja Fellowship and its transfer from UAS to UHS. He was provided a copy of the correspondence among UAS/UHS/PNASF in this regard.

Dr. Nath informed that PNASF has already indicated that the Fellowship was (a) for any branch of horticulture but vegetables preferred because the Fellow has to work with the school nutrition project, (b) it was for Hebbal Campus only, (c) preferably for the Ph.D. students and (d) the dissertation of the Fellow will include his/her activities of the project.

PNASF/Dharmasheela Nath Scholarship/2006

With regard to Biological Science and Nutrition Project, a meeting was held on February 4, 2011 at 4.00 p.m. at the PNASF office. The members present were Dr. B.S. Prabhakar, Prof. H.B. Shivaleela, Professor and Head, Department of Food, Science and Nutrition, UAS, Bangalore and Dr. Prem Nath, Chairman, PNASF.

It was noted that the Dharmasheela Nath Scholarship holder Ms. Shalmali Naik was about to complete her M. Sc. Thesis and the UAS has not yet nominated the next candidate for 2010-2011. Dr. Shivaleela was requested to get it expedited preferably for a Ph.D. candidate.

Ms. Savitri Byadagi Ph. D. student (Food Science and Nutrition) was awarded to PNASF Dharmasheela Nath Scholarship at the University of Agricultural Sciences, GKVK, Bangalore vide Notification No. R/SA-II/PG/PNASFD School/2009-10 dated June 20, 2011.

Dr. Shivaleela was briefed about the new school namely *Free Residential School, Shrimad Vibhuthipura Veerasimhasana*

Samshthana Math, Vibhuthipura, Marathahalli Main Road, Bangalore-560 037 to be adopted for the school nutrion project to start during the next academic year beginning June, 2011. She agreed to cooperate as before for the two previous students, Ms. Shilpa Yatnatti and Ms. Shalmali Naik.

She was also informed that the Smt. Devki Devi Ahuja Fellowship for Horticulture Student was transferred to UHS and Dr. K.M. Indiresh has been contacted to nominate the new candidate for which he had agreed.

Dr. Shivaleela came up with a proposal that the nutrition project may also be launched at the High School of the UAS campus for which the Vice-Chancellor and Director of Research may be contacted. Dr. Nath agreed that this proposal will be discussed at the next TAC meeting.

New Year Day Celebration

Dr. P.N. Agricultural Science Foundation(PNASF) observed the New Year Day Celebration by organizing an evening get together on Saturday, January 01, 2011 at the PNASF premises. The invitees on the occasion were PNASF officials, collaborators, well wishers and friends. Among them present were Shri M.V. Rajasekharan ji, former Union Minister for Planning, Government of India; Dr. P.V. Shenoi, former Special Secretary of Agriculture, Government of India; Dr. S. Bisaliah, former Vice Chancellor, University of Agricultural Sciences (UAS), Bengaluru; Dr. G.K. Veeresh, former Vice Chancellor, University of Agricultural Sciences (UAS), Bengaluru; Dr. K. Narayanagowda, Vice Chancellor, University of Agricultural Sciences (UAS), Bangalore; Mr. N.S. Megharikh, Karnataka State Human Rights Commission, Bengaluru; Dr. C.P.A. Iyer, former Director, Central Institute of Sub-tropical Horticulture, Lucknow; Dr. P.G. Chengappa, former Vice Chancellor, University of Agricultural Sciences (UAS), Bengaluru; Dr. A.S. Sidhu, Director, Indian Institute of Horticultural Research (IIHR), Bengaluru; Mr. V.K. Abraham, Director, Institute of Plantation & Horticulture Management (INPHOM), Bengaluru; Prof. U.V. Sulladhmath, Dr. O.P. Dutta, Dr. K.R.M. Swamy, Dr. K.M. Indiresh, Mr. P.B. Gaddagimath and others.

Some of the members present at the get together at the PNASF

The event was marked by snacks, cocktail and very lively informal discussion on issues of food and agriculture in Karnataka and in India. The occasion expressed togetherness on relevant issues facing farmers and consumers. The newly published PNASF News letter was distributed on this occasion.

Dr. Prem Nath, Chairman, PNASF thanked the invitees and others supporting the event.

PNASF Family congratulates Ms. Rohini Prabhakar and Mr. Anang A. Shrinivas

On March 04, 2010, Dr. B.S. Prabhakar's daughter Ms. Rohini got married with Mr. Anang A. Shrinivas at Bengaluru. On the same evening PNASF members participated in the reception of newly wed couple and congratulated them. On their return from abroad the get-together will be held to welcome the couple.

Ms. Rohini Prabhakar and Mr. Anang A. Shrinivas

INFORMATION DISSEMINATION

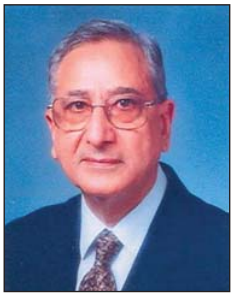
Board of Trustees Meet

The Board of Trustees met once on November 10, 2010 and Technical Advisory Council met three times during the period January-June 2011.

Senior Scientific Councillors (SSC)

In order to augment the scientific input, the Board of Trustees in its last meeting approved of the inclusion of Honorary Senior Scientific Councillors with life-long experience and contribution in agriculture and allied sciences to PNASF. Accordingly, the Board of Trustees nominated and invited the recognized Senior Scientists, who had supported and participated in PNASF activities, since it was founded. The scientists who had gladly accepted the nomination as the Honorary Senior Scientific Councillors are mentioned below. The PNASF feels privileged to honour these outstanding scientists.

1. Dr. V. L. Chopra, New Delhi, India



Born in Adhwal, India on August 9, 1936. Educated at Ramjas School, Delhi, 1947-51; Hindu College, Delhi 1952; Central College of Agriculture, Delhi, 1952-55; Indian Agricultural Research Institute, 1955-57; Institute of Genetics, Edinburg, Scotland, UK, 1964-67; B.Sc. 1955; Assoc. IARI, 1957; Ph.D. 1967.

Prof. of Genetics, 1970-84, and Head, Division of Genetics, 1977-80, IARI, New Delhi; Director, National Biotechnology Centre, New Delhi, 1985-90; Chief Technical Adviser, FAO, Vietnam, 1990-91; Director General, ICAR & Secretary to Government of India, 1992-94; National Professor B.P. Pal Chair, National Research Centre on Plant Biotechnology, IARI, New Delhi, 1994-2002; Member, Planning commission, Government of India, New Delhi, 2004-09.

Awards/Honors: Borlaug Award, 1983; Padma Bhushan, 1985; FICCI Award, 1986; Watumull Foundation, USA Honor Summus Medal, 1987; O.P. Bhasin Award, 1987; Food Day Award, 1993; ISCA Birbal Sahni Birth Centenary Award, 1997; INSA Silver Jubilee Commemoration Medal, 1991; INSA Aryabhat Medal, 2001.

Fellow: Indian National Academy; National Academy of Sciences, India; Indian Academy of Science; European Academy of Arts, Science and Humanity; Third World Academy of Sciences.

Research Areas: Plant Biotechnology, crop genetics and breeding.

2. Dr. Kirti Singh, New Delhi, India

Born in Jaunpur, India on May 26, 1934. Educated at Central Hindu School, Varanasi 1948-50; Government Agricultural College, Kanpur 1951-55; University of Florida, USA, 1958-62; B.Sc. 1955; M.S. 1960; Ph.D. 1962.

Chairman, World Noni Research Foundation; Scientists Pool Officer 1962-63; Vegetable Specialist, Jammu and Kashmir, Srinagar 1963-65; Associate Professor/ Vegetable Botanist, Punjab Agricultural University, Ludhiana/Hisar, 1965-70; Professor and Head, Department of Vegetable Crops, Haryana Agricultural University, Hisar, 1970-77; Dean of Agriculture, Narendra Deva University of Agricultural and Technology, Faizabad (UP); Vice-Chancellor, Himachal Pradesh Agricultural University, Palmpur, 1989-93, Vice-chancellor, Indira-Gandhi Agricultural University, Raipur 1993-95; Member, 1995-98 and Chairman, 1998-99, Agricultural Science Recruitment Board; Advisor, Government of Nepal Establishment of Agricultural University, 1995; FAO Consultant in Cambodia 1999.

Awards/Honors: Leonard Vaughan Award of Amer. Soc. Hort. Sci. 1961; Hort. Society of India Gold Medal 1993; D.Sc. (h.c.) TNAU, 2000; PNASF Gold Medal 2002; Purvanchal Rathna Award, 2003; Senior Vice-President, Hort. Society of India; HIS Shiv Shakti Life Time Achievement Award, 2007; World Wellness Open University Life Time Achievement Award, 2008.

Fellow: National Academy of Sciences, India; Indian Potato Association; Indian Society of Vegetable Science; Horticultural Society of India; National Academy of Biological Science.

Research Area: Vegetable Science.

3. Dr. S. Bisalaiah, Bangalore, India

Born in Maddur Village, Chamarajnagar District, Karnataka, India on February 15, 1938. Educated at Masters degree in Economics, University of Mysore, 1961; Ph.D., University of Minnesota, 1975.

Assistant Professor/Associate Professor and Professor, University of Agricultural Sciences (UAS), Bangalore; Registrar and Vice-Chancellor, UAS, Bangalore; Coordinator, Project Planning and Monitoring Cell, UAS, Bangalore; Visiting Professor, University of Mysore; Member, Academic and Administrative Audit Committee, Bangalore University; Member, Karnataka State Science and Technology Academy; Chairman, Karnataka Agriculture Price Commission; Chairman, B.M.S. college of Engineering and B.M.S. College for Women; Monitoring and Evaluation Expert, World Bank Forestry Project, Nigeria; Thrice Consultant to F.A.O. (Rome), U.N. Social Commission for Asia and Pacific, Bangkok; Once Consultant to World Bank, and F.A.O.; Once Consultant to Asian Development Bank.

4. Dr. R. Dwarakinath, Bangalore, India

Born in Doddaganjur, Chintamani Taluk, Karnataka on September 9, 1926. B.Sc. Agri Mysore University, 1949; M.S.-Extension Education, University of Tennessee, USA, 1960; Ph.D. – Extension Education, Cornell University, USA, 1973.

Soil Survey Officer, Bhadra Reservoir Project, Shimoga, 1949-1950; District Agriculture Officer (Probationer), State Dept of Agriculture, 1950-52; Extension Keyman, Pilot Extension Project; (Ford Foundation) Malavalli, Mandya dist, then Project Executive Officer, NES Project, Malavlli, 1952-1956; Principal, Pilot Training Centre, (Ford Foundation) Mandya, 1956-1958; Asst. Prof. of Agronomy-Extension, Agricultural College, Bangalore, 1958-60; Director of In-service Training, Govt. of Karnataka. 1960-64; Principal, Orientation and Study Centre, Hyderabad, GOI, 1964-65; 1965 to 1973 Director of Extension, University of Agricultural Sciences, Karnataka, 1965-73; Director of Agriculture, Govt. of Karnataka, 1973-79; Vice-chancellor, University of Agricultural Sciences, Karnataka; 1979-81; Chief Technical Adviser, FAO, Indonesia, -1981-87;

Tasks and Assignments : Resource person to the Danida Appraisal Mission on Farm Women Extension programme in Madhya Pradesh, 1990; Member, State Planning Board, Karnataka, 1992-99; 1995 - Member, Bio-diversity Conservation Group, Centre for Ecological Sciences, Indian Institute of Science under the project of the Karnataka Council for Science and Technology, 1995; Chairman, Fifth Research Review Committee, Indian Coffee Board, 1996; Member, Research Council, Central Silk Board, India 1997-2011; Chairman, Karnataka Agriculture Commission, 2000; Chairman, AME Foundation, Bangalore, 2002 -to date.

Awards/Honours: Rajyothsava Award, Karnataka; National Extension Award, Indian Society of Extension Education; "Sir M. Visvesvaraya Senior Scientist State Award" October 2004; "Lifetime Achievements Award" by Indian Society of Extension Education, January 2005; 2008 "Lifetime Achievement Award" by International Society of Extension Education, Sep' 2008.

5. Dr. G. K. Veeresh, Bangalore, India

Born on April 4, 1934. Educated at B.Sc. (Agri), Mysore University, 1957; M. Sc.(Agri), IARI, New Delhi, 1960; Ph.D., UAS, Bangalore, 1973; Postgraduate Fellow at Rothemsted Experimental Station, U.K. and Oregon State University, Corvallis. USA, 1975.

Lecturer, Agricultural College, Hebbal, Bangalore, 1961-1967; Assistant Professor,

UAS, Bangalore, 1967-1975; Professor, Department of Entomology, UAS, Bangalore, 1975-1982; Senior Professor, Department of Entomology, UAS, Bangalore, 1982-1986; Head, Division of Plant and Soil Sciences, UAS, Bangalore, 1986-1994; Special Officer for establishment of new Colleges under UAS, Bangalore, 1988-1993; Director of Instruction (Agri), UAS, Bangalore, 1988-1993; Dean, University of Agricultural Sciences, Bangalore, 1993-1994; ICAR Emeritus Scientist at the University of Agricultural Sciences, Bangalore, 1994-1995; Vice-Chancellor and Chief Executive Head, University Administration, University of Agricultural Sciences (UAS), Bangalore, 1995-1998; Member, National Agriculture Technology Project-Coastal system, 1998-2000; Member, R.P.C., NATP, New Delhi, 2000; Member, Karnataka Agricultural Commission; Chairman, High Power Committee on Farmers Suicide, Government of Karnataka, 2001-2002; Chairman, Minimission on organic farming, GOK, 2004.

President, Association for Promotion of Organic Farming 2000 to date.

ICAR Scientific Panel Entomology, 1978-79; ICAR Quinquenmial Review Team on Tobacco, 1981-82; Karnataka Forest Advisory Board, 1984-85; ICAR Scientific Panel Education, 1986-88; Central Insecticide Board, Carbamate Group, 1988; Scientific Advisory Committee, Ministry of Commerce (Plantation), Government of India, 1991; National Research Council (U.S.A), Committee on Sustainable Agriculture and Natural Resource Management Co-operative Research Programme- Washington, 1991-92; ICAR Quinquennial Review Team. Central Plantation Crops Research Institute and AICRP on Palms, 1993-94; ICAR Dean's Committee for developing curriculum for Agriculture, 1993-94; Member, Assessment Committee of Central Coffee Research Institute on Pest and Diseases, 1994-95; Chairman, ICAR Quinquennial Review Team on AICRP Biological control, 1998-99; Director, Board of Directors, Nagarjuna Agriculture Research & Development Institute, 1998-2000; Member, Monitoring and Evaluation of World Bank Project – NATP –IPM, 2001-03; Chairman, International Union for Biological Sciences – Commission on Social Insects, 1986-90; President, Indian Society of Soil Biology and Ecology, 1976-90; President, International Union for Study of Social Insects – Indian Chapter, 1990; President, Alumni Association, UAS, Bangalore, 1990; President, Association for Promotion of Organic Farming (Rg), 1996; President, Arboriculture Association of India (Rg), 2000 to date

6. Padmashree Dr. M. Mahadevappa, Bangalore, India

Born in Madapura, Karnataka, India on August 4, 1937. Educated at Government Primary School, Madapura, 1948; Government Boys Middle School, Chamarajanagar, 1952; Municipal High School, Chamarajanagar, 1955; Sharada Vilas College, Mysore, 1957; B.Sc., Agricultural College, Bangalore, 1960; M. Sc. And Ph.D., Agricultural College, Coimbatore, 1960 and 1965.

Professor of Genetics and Plant Breeding, Seed Instruction, 1993-94; Vice-Chancellor, University of Agricultural Sciences (UAS), Dharwad, 1994-2000; Chairman, Agricultural Scientists Recruitment Board, New Delhi, 2001-02. Director, JSS Rural Development Foundation, Ramanuja Road, Mysore, to date.

Awards/Honours: KKM Award, 1972; Hooker Award, 1981; Karnataka Government Rajyothsava Award, 1984, 1984; Nagamma Dattathreya Award, 1989; Sir Chotu Ram Award, 1996; Basava guru Karunya Award-Ilkal, 1996; Bharat Ratna Sir. M. Vishweshwarayyya Memorial Award, 1999; Padma Shri, 2005; Lifetime Achievement Award, Agriculture Leadrship Award, 2009.

Fellow: National Academy Of Sericulture Sciences; National Academy of Biological Sciences; Indian Society of Genetic and Plant Breeding; Indian Society of Seed Technologists; Indian Science Writer's Association.

Research Areas: Genetics, Plant Breeding, Seed Technology, Parthenium Weed Control.

7. Dr. P.G. Chengappa, Bangalore, India

Born in Kodagu district, Karnataka, India on February 11, 1952. Educated at B.Sc. (Agri.), Agriculture College Dharwad, 1973; M.Sc. Agricultural Economics, UAS, Bangalore, 1976; Ph. D., Agricultural Economics, IARI, New Delhi, 1990.

Capacities of Director of Instruction (Agri.), UAS, Bangalore; Registrar and Director of Student Welfare, UAS, Bangalore; Professor and Head of Agricultural Marketing, UAS, Bangalore; Director of Instruction (Agri.), UAS, Bangalore; Vice-chancellor, UAS, Bangalore; Professor, UAS, Bangalore

Research Assistant at the Dry land Agricultural Research Project of the UAS; Agricultural Economist, Indian Coffee Board; Associate Professor of Agricultural Marketing, Associate Professor, UAS, 1980; Professor and Head Department of Agricultural Marketing and Cooperation, 1983; Socio Economist, Interjiatipnai, Plant Genetics Research Institute.

Agricultural Economist, CGIAR; Visiting Scientist, IRRI, Manila, University of Reading, College pf Wales Aberystwyth, United Kingdom; Vice-President, Indian Society of Agricultural Economics; Vice-President, Agricultural Economics Research Association, New Delhi; National Professor, ICAR, 2007

Visiting Scientist, International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad (1995); Consultant at the International Rice Research Institute (IRRI), Manila (2001); Facilitator, DSE, Feldafing, Germany to an international training course on Agricultural Marketing (1997); Socio Economist, IPGRI South Asia Office, New Delhi, 2002-03; Consultant, International Food Policy Research Institute, Washington (2005-06).

Instrumental in UAS receiving the ICAR's Sardar Patel best Agricultural University award.

8. Prof. R.S. Deshpande, Bangalore, India

Born in India. Educated at B.Sc. (Mathematics, Physics and Chemistry); M.A. (Economics, Econometrics, Mathematical Economics); Ph.D. (Economics) Marathawada University, Aurangabad (1967-73).

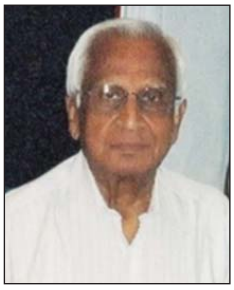
Currently he is Director of Institute for Social and Economic Change (ISEC), Bangalore.

Member, Editorial Board, Indian Development Review, New Delhi, 2008; Member, Management Council of Bombay School of Economics, Mumbai University, Mumbai, 2007-08; Member, Academic Council and Trustee, Indian Institute of Dalit Studies, New Delhi 2006 onwards; Member, Management Committee, National Centre for Agricultural Economics and Policy Planning, 2005 onwards; ICAR Nominee, Research Advisory Council, Central Plantation Research Institute, Kasargod. 2004; Vice President, Indian Society of Labour Economics, New Delhi. 2001

Convener Expert Group for Preparing Manual for Comprehensive District Agricultural Plan, Planning Commission, Government of India, 2007-08; Member, Research Advisory Committee of National Centre for Agricultural Economics and Policy Research (NCAEPR), New Delhi, 2007-08; Member, Research Advisory Committee of Indian Agricultural Statistics Research Institute, New Delhi, 2007-08; Chairman, Drafting Committee on Karnataka's Agricultural Policy, 2006; Member, Agricultural Prices Commission, Govt of Karnataka, Bangalore, 2004-2006 onwards; Member, Expert Committee on Preparedness for WTO and its Impact on Agriculture, Ministry of Commerce, Government of India, New Delhi, 2002- onwards; Chairman of the Drafting Committee of the Report of the WTO Cell 2001; Member, Minimum Wages Committee, Govt of Karnataka, Bangalore, 2001-02.

Area of Specialization: Agricultural Development Policy; International Trade in Agriculture and WTO ; Agricultural Production and Resource Economics; Watershed Management and Irrigation; Econometrics & Applied Statistics

9. Dr. Vishnu Swarup, New Delhi, India



Born on July 30, 1925. Educated at Wesley High School, Azamgarh, U.P., 1940; Allahabad Agricultural Institute, Naini, Allahabad, Intermediate in Agriculture 1940-42; Government Agriculture college, Kanpur, B.Sc. 1944 and M.Sc. 1946; Indian Agricultural Research Institute, New Delhi, Assoc. IARI 1948; Kansas State University, USA, M.S. 1954 and Ph.D. 1955.

Vegetable Breeding Assistant, 1948-53, and Assistant Oilseed Specialist, , Department of Agriculture, U.P. 1953-54; Graduate Research Assistant, Department of Botany, 1953-55; Assistant Instructor, Department of Agronomy, 1955-56; Kansas State University, Manhattan, Kansas, USA; Assistant Geneticist, 1956-58; Assistant Professor, 1958-59; Division of Botany, Vegetable Specialist, 1959-62; Geneticist (Floriculture), 1962-68; Senior Geneticist (Floriculture), 1969-70; Division of Horticulture, Chief Vegetable specialist, 1970-71; Project co-Coordinator, 1971-82; Division of Vegetable Crops and Floriculture, IARI, New Delhi; FAO Vegetable Expert in Nigeria; Consultant in the Philippines and Zimbabwe and Consultant of the Commonwealth Secretariat in the South Africa Development Community (SADC) Countries; Visiting Scientist in Bulgaria and Hungary.

Awards/Honours: Delhi Agri-Horticultural Society Dayawati Vira Medal, 1988; HIS Golden Jubilee Award, 1993; Dr. M.H. Marigowda Memorial National Award, 1998; All India Kitchen Garden Association Gold Medal Award; PNASF Gold Medal for life-time-achievement in vegetable research and development in India, 2002.

10. Dr. Anupam Varma, New Delhi, India

Born in Delhi, India on July 23, 1940. Educated at Agarwal Intermediate College, Allahabad 1953-57; Allahabad University 1957-61; Rothamsted Experimental Station, Harpenden, U.K. 1964-67; B.Sc. 1959; M.Sc. 1961; Ph.D. 1967.

INSA Senior Scientist, Advanced Centre for Plant virology, IARI, 2005 to date.

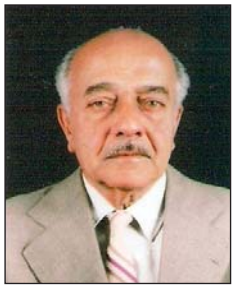
FAO Applied Plant Virologist FAO, Nigeria 1979-81; Professor of Virology, 1984-86; Professor of Plant Pathology, 1986-88, Head Division of Plant Pathology, 1988-95; Dean, 1995-2000; and ICAR National Professor, AdvancedCentre for Plant Virology, 200-2005; Indian Agricultural Research Institute, New Delhi. Chair, International Council For Science Regional Committee for Asia and Pacific, 2006-08.

Awards/Honours: FAO/IASS World food Day Award, 1985; VASVIK Award, 1989; O.P. Bhasin Award, 1992; James Wallace Award, Int. Or. Citrus Virol., 1999; NASI R.N. Tandon Award, 2000; INSA T.S. Sadasivan Award, 2002; ISCA Millennium Plaque of Honour Award 2006; IVS K.S. Bhargava Award 2007; PNASF Gold Medal Award, 2009.

Fellow: Indian National Science Academy; National Academy of Sciences; Indian Phytopath. Soc.; Indian Virol. Soc.

Research Areas: Plant Virology, Plant Pathology, Plant Biotechnology, Crop Protection.

11. Prof. U.V. Sulladmath, Bangalore, India



Born in Dharwad, India on August 5, 1925. Educated at B.Sc. (Agri.) Hons. Bombay University, 1948; M.Sc. (Agri.), Horticulture, Karnataka University, 1958; M.S. (Tenn) Horticulture, University of Tennessee, USA, 1961; Ph. D., Indian Agri. Research Institute, New Delhi, 1971.

Teaching, Research and Extension in

Horticulture in the State Departments of Horticulture/Agriculture and the University of Agricultural Sciences, (1948 to 1985); Professor & Head, Division of Horticulture, University of Agri. Sciences, Bangalore, (1971 to 1985); Assistant Coordinator of the U.N.D.P. Centre of Advanced Studies in Tropical Horticulture in the University of Agri. Sciences, (1979 to 1986); Emeritus Scientist of the Indian Council of Agricultural Research in the University of Agricultural Sciences, Bangalore, (1985 to 1989).

Member / Executive Councillor 'of 8 professional societies / organizations; Member of the ICAR Scientific Panel for Fruits, Plantation Crops and Medicinal Plants since (1981 to 1993); Member of Boards of Studies in Horticulture / Agriculture of several Agricultural Universities; Expert member of Selection Committees of several Agricultural Universities and Agricultural Scientists' Recruitment Board; External examiner for Post-Graduate students of several Agri. Universities.

Worked as Project Director with Indian Horticulture Consultancy Service, Bangalore for one year and a half ; Worked as Project Co-ordinator, Export Oriented Project for Flowers and Vegetables. All India Scheduled Castes Development Co-operative Society Limited, Bangalore, from January 1990 to December 1991; Prepared several reports/project proposals for State Government and private organizations; Consultant / Advisor, Centre for Technology Development, Bangalore from April 1991. to date.

12. Dr. C.P.A. Iyer, Bangalore, India

Born in Kerala State, India. Educated at B.Sc.(Hons.), Agriculture, University of Delhi, 1958; M. Sc. and Ph.D. Degree in Horticulture I.A.R.I., New Delhi. Ph. D., Institute of Horticultural Plant Breeding, Wageningen, The Netherlands, in 1965.

Geneticist(Fruits), Indian Institute of Horticultural Research, Bangalore, 1968; Head, Division of Fruit Crops at the same Institute; ICAR All India Project Coordinator for fruits and coordinated research project on fruits on an all India basis. Subsequently appointed Director, Central Institute of Horticulture, Lucknow, India.

Evolved many hybrid varieties in mango, guava and papaya. Dr. Iyer was invited by the CSIRO, Australia to take up the prestigious McMaster Fellowship to organize the Australian National Mango Breeding Project which he successfully carried out in 1994. Dr. Iyer has published more than 200 papers in scientific journals. Has guided many students for their M. Sc. and Ph.D. Degrees. Board of Examiners in many Universities in India and abroad.

Keynote speaker and Chairman of many sessions during International Mango Symposium held in India, Australia, Israel and Brazil.

FAO Horticulturist of FAO, UNDP/FAO Mango project, Bangladesh, Nigeria, Myanmar and Bangladesh.

Continues to take active part in international consultancy, writing books, giving lectures and attending symposia.

Redesigned Website-www.pnasf.org

The website of PNASF has been redesigned and would be launched shortly.

Publications

- Nath, Prem, (2010); Role of Horticulture in Livelihood Security, Horticulture and Livelihood Security, Scientific Publishers (India), Jodhpur & P.N. Agricultural Science Foundation (PNASF), Bangalore, pp 1-11.
- Nath, Prem and Varma, Anupam; (2010); Vegetable Science International Network (VEGINET), Horticulture and Livelihood Security, Scientific Publishers (India), Jodhpur & P.N. Agricultural Science Foundation (PNASF), Bangalore, pp 534-545.
- Nath, Prem (2010); Foreword, Underutilized and Underexploited Horticultural Crops Vol. 5, NIPA, New Delhi
- Nath, Prem (2011); Growing Role of Vegetables on Livelihood Security, Abstract Book, 1st International ISHS Symposium on "Sustainable Vegetable Production in South East Asia, Salatiga (Indonesia), 13-17 March 2011
- Nath, Prem (2011); Food Security- A Dilemma, Bangalore International Center, Bangalore, Website-www.bicentre.org
- Nath, Prem (2011); Food Security- A Dilemma, Plant Horti Tech, Bangalore, Vol. 10 No. 6, March-May 2011, p 32 & 48

Thesis Submitted

Ms. Prema G. submitted her thesis entitled "Assessment of Genetic Variability and Character Association For Growth, Yield and Quality Attributes in Cherry tomato *(Solanum lycopersicum var. cerasiforme)*"

The investigation entitled "Assessment of Genetic Variability and Character Association For Growth, Yield and Quality Attributes in Cherry tomato *(Solanum lycopersicum var. cerasiforme)*" was undertaken during the year 2009-10 in the Department of Horticulture, University of Agricultural Sciences, Gandhi Krishi Vgnana Kendra (GKVK), Bengaluru. The main objective was to assess the extent of variability available in the open pollinated genotypes of cherry tomatoes for growth, yield and quality traits and to isolate superior genotype for further utilization in the improvement programme.

The results of the study that among six genotypes of cherry tomatoes studied, it was observed that Podland Pink (4.25 kg) recorded high fruit yield per plant followed by Tomy Toe (3.64 kg). the variability estimates revealed that considerable variation are observed for various for growth, yield and quality parameters such as average fruit weight, fruit length and width, fruit yield per plant, firmless, shelf life, lycopene content. The estimates of heritability (broadsense) and GAM were high for days to 50% flowering and average fruit weight, fruit length and width with fruit yield per plant. Maximum positive direct was exhibited by number of branches at 90 days after transplanting, average fruit weight, fruit length, and fruit width for fruit yield per plant.

Among the genotypes evaluated for growth, yield and quality traits Podland Pink genotype was found to be promising which can be utilized as improved breeding line for further improvement.

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Book – Foods and Nutrition (Pages: 485) 2009	Available with Studium Press LLC 4735/22, 2nd Floor, Prakash Deep building (Near PNB), Ansari Road Darya Ganj, NEW DELHI-110 002.	
ICH-2009-Proceedings-CD (Pages: 2553) 2010	100.00 including postage	50.00 including postage
Book-Horticulture and Livelihood Security (Pages: 550) 2011	Available with Scientific Publishers 5-A, New Pali Road, P.O. Box 91 Jodhpur - 342 001, Rajasthan Phone: +91.291.262 4154 Fax: +91.291.261 3449	

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Plans on hand

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

- Participation in conferences/Symposium/Workshop/Congress; *HIVEGSEA-2012, Chiang Mai, Thailand during January 24-26, 2012;*
- 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.

Contribution/Membership

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

Website: **www.pnasf.org**
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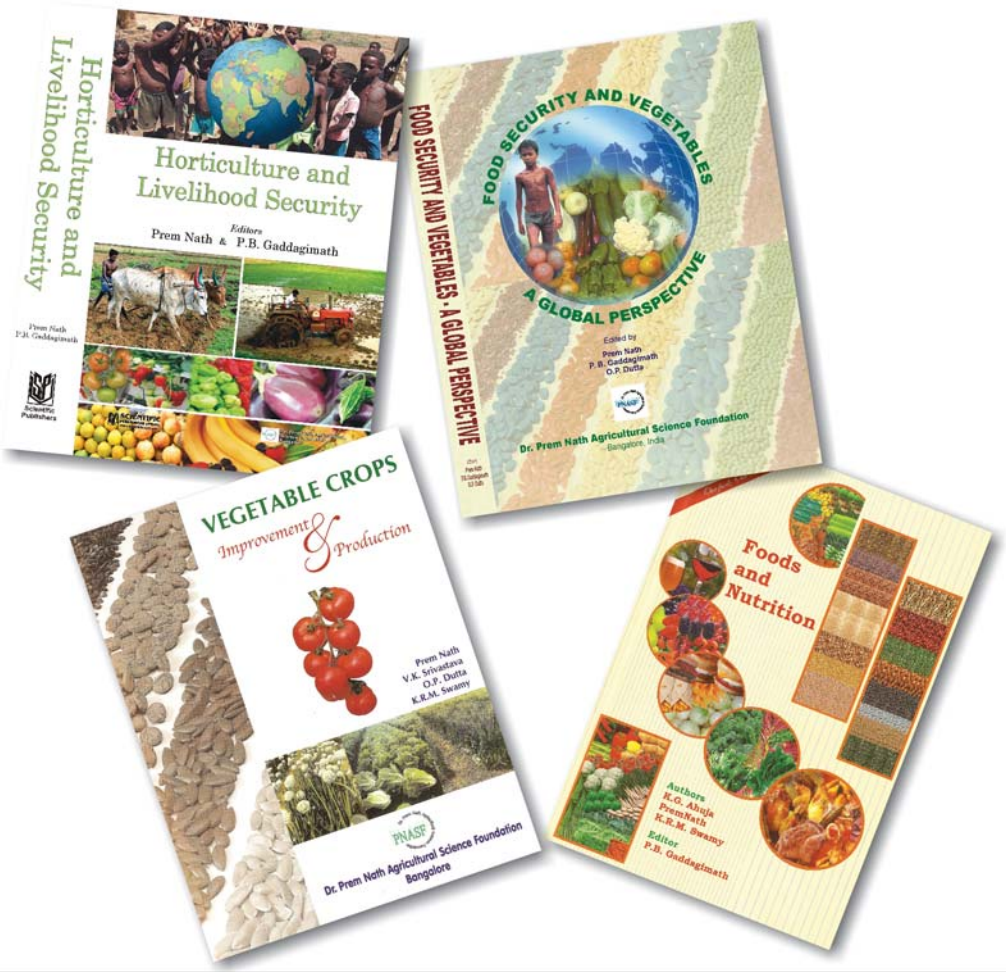
Publications of PNASF



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