



POTATO

आलू Newsletter

CENTRAL POTATO RESEARCH INSTITUTE
Indian Council of Agricultural Research
SHIMLA - 171 001, HP, INDIA

No. 29

December, 2003

Four more varieties of potato for release

A group meeting of potato workers of All India Coordinated Potato Improvement project held at UAS, Bangalore during 5th-7th September, 2003 has recommended release of four new potato hybrids. These four hybrids were recommended by the group meeting after judging their performance for several years under different conditions and locations. The potato hybrids recommended are: (i) JW-160; (ii) MS/92-2105; (iii) SM/87-185; (iv) HT/92-621. Out of these four, the hybrid HT/92-621 is unique because it is for the first time that an Indian potato variety

Dear Colleagues,

I take this opportunity to wish you all a personally happy and professionally successful New Year 2004. Bynow you might have identified goals for 2004. I wish you all success in achieving the targets fixed for 2004. The year 2003 has almost passed. We must analyse what we did in 2003 and what could be not done and why.

So far as potato research and development is concerned, the year 2003 was another year of success. To be complacent with the success of passing year is the beginning of failure in the coming year, so we must resolve to work hard with zeal and enthusiasm in the coming year. We should forget the past and think for present and future. Yes we must forget the past but should learn lessons from the past and try to improve. Despite of manpower shortage in all categories we have made achievements. In the coming years there may be further shortage of manpower but I am hopeful and confident that still better results will be produced by you.

SM Paul Khurana
Director



JW-160, SM/87-185, MS/92-2105 & HT/92-621

suitable for cultivation in non traditional warmer areas has been developed. This hybrid possesses tolerance to heat and drought condition and resistance to hoppers and mites with higher dry matter and suitable for processing as French fries. This hybrid was evaluated in non traditional areas like Kerala and plains of Tamil Nadu and several other comparatively warm areas and found promising. This would open up avenues for extending potato cultivation in hitherto non potato growing areas and may meet the demand of French fries which otherwise have to be imported.

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Happy New Year 2004

Nutrient Sources for Organic Potato Production

V.S. Kushwah and S.P. Singh

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Organic farming is the back bone of sustainable agriculture. Organic farming may result in complete performance as conventional agriculture and application of higher amount of organic manure may develop increased pest and disease resistance in crops.

At present, many of the methods being used including heavy application of inputs to increase production and productivity are damaging to natural resources and the environment and farmers are supposed to invest heavily on inputs to improve yield and productivity. The food containing pesticides and other chemicals are increasingly made obvious by many research studies revealing the presence of pesticide residues.

Organic farming is a method of production rather than characteristics of the food so described and are focused on soil fertility based on humus and aimed at ecological balance within the farm. Organic growers can not apply toxic chemicals used in most conventional agriculture and may not grow genetically engineered crops. System heavily relies on crop rotation, animal and plant manures, hand weeding and biological pest control etc. In order to avoid the deleterious effects of synthetic chemical fertilizers and

pesticides, organic farming is needed as an alternative to provide ecologically safe methods of farming.

Sources of organic matter

Organic matter is the food for most of the flora and fauna responsible for soil biological activities. The term soil organic matter is generally used to represent the organic constituents in the soil, excluding undecayed plant and animal tissues, their partial composition products and soil biomass.

Organic wastes: A huge quantity of plant residues available in India has not been properly utilized in the past because of our dependence on quick acting chemical fertilizer. Crop residues in the form of roots, stems and leaves etc. are left over in India to the tune of approximately 185 million tonnes. If it can be managed properly, it will annually provide 3.32 million tonnes of N, P and K. In most of the cases such crop residues are either removed from the field at the time of field preparation or burnt out. Such a practice is against agricultural view point. In areas where harvesting of crop is done through combine harvesters which leave a good quantity of stem of crops such as rice and wheat, burning of residues is becoming most popular. Crop residue management from these crops can add organic carbon and nutrients to the soil.

Farm yard manure: Good quality FYM is perhaps the most valuable organic matter applied to a soil. It consist of a decomposed mixture of cattle dung, crop residue used for bedding in cattle sheds and any remnants of straw and plant stalks fed to cattle. Unfortunately more than 50% of the cattle dung produced in India is burnt as fuel and is thus loss to agriculture.

Compost manure: Composting is the process of reducing vegetable and animal refuse to a quickly utilizable condition for improving and maintaining soil fertility. Good organic manure similar to fertilizing value of cattle manure can be produced from waste material of various kinds, such as crop straw, crop stubbles, farm weeds, leaves, wood ash etc. Composting reduces C:N ratio of wastes from 40: 1 to 10-12:1.

Green manure: Ploughing or turning into the soil undecomposed green plant tissues for the purpose of improving physical structure as well as fertility of the soil. Sunnhemp and *dhaincha* are among two important

From page 1...

Potato varieties....

There are some areas in Northern plains where cool climate which potato loves most is for a shorter duration. This hybrid may be grown in such areas and period as an early crop. The hybrid JW-160 besides being resistant to late blight has wide adaptability. It may be grown in the entire northern plain and plateau areas of the country. The most significant feature of this hybrid is that it can be stored under ambient temperature without much loss. The hybrid will be preferred by the farmers as well as consumers for its excellent keeping quality. The hybrid MS/92-2105 is a red skinned potato having resistance to late blight and a better substitute of the existing red skinned and late blight succeseptible cultivars Kufri Lalima and Kufri Sindhuri. In the eastern part of country consumers prefer red skinned potatoes. It is likely to meet their demand. The fourth hybrid SM/87-185 is bred for cultivation in the hills having resistance to late blight, and better keeping quality than Kufri Giriraj. The hybrids is likely to reduce dependence of hill farmers on Kufri Giriraj only and avoid the mono culture of a single variety in the hills.

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DG's visit to Shimla and Modipuram

Dr. Mangla Rai, DG, ICAR and Secretary DARE briefly visited CPRI Campus, Modipuram on 14th November, 2003. He met with staff of the Campus and visited our research farm. The DG emphatically suggested to rapidly multiply the seed material of the transgenic lines with Amai gene for multilocation trails in the coming years. He also suggested to keep on going experiments in readiness for VIP visits and the entire data generated on yield and expression of transgenic lines should be available at the Campus for briefing the VIPs.



Dr Mangla Rai at CPRS kufri (Shimla)

Dr Mangla Rai, DG, ICAR prior to Modipuram visited Shimla HQ of CPRI on 2nd & 3rd October as the Chief Guest at the National Symposium-Potato Research towards National Food & Nutritional Security. Dr Rai took a round of various tabs at CPRI and visited Kufri Farms

Dr S Ramanujam Birth Centenary Celebrations

Birth Centenary of Dr S Ramanujam founder Director of CPRI, was celebrated at CPRI, Shimla on 2nd October, 2003. On this occasion, Mrs Vedam Ramanujam wife of



Garlanding portrait of Dr Ramanujam



DG, ICAR with scientists of CPRIC, Modipuram

late Dr Ramanujam also come over. Besides several other members of Dr Ramanujams family took part in the Centenary Celebrations. There could have been no better way to celebrate birth centenary of Dr Ramanujam other than organizing a national symposium on Potato Research towards National food and Nutritional Security which went side by side the centenary celebrations. Dr Mangla Rai, Director General, ICAR in his key note address paid rich tributes to Dr Ramanujam later in the evening session. The celebrations started with the release of a special



DDG (H), Dr G Kalloo (centre) with other dignitaries in the audience

Souvenir for the Birth Centenary, garlanding of Dr Ramanujam's portrait and most importantly unveiling of the bust of Dr Ramanujam installed at the entrance of main building of CPRI. Several speakers who were directly or indirectly associated with Dr Ramanujam spoke about him viz Dr KI. Chadha, Dr Kirti Singh, Dr JS Grewal, Dr SM Paul Khurana, Dr LC Sikka and particularly Dr SC Verma who worked at CPRI Patna in close association of Dr. Ramanujam during 1954-1956. A office building at the Central Potato Research Station, Muthorai, Ooty (TN) was also named after Dr Ramanujam.

The memorable even of the celebration included presentation of the first ever Dr S Ramanujam Award. The award announcement was made by Dr LC Sikka, Chairman of the Award Committee. Dr SM Paul Khurana, Director CPRI bagged this prestigious award presented to him by both Mrs. Ramanujam & Dr. Mangla Rai, DG, ICAR. Mrs. Vedam Ramanujam wife of late Dr S Ramanujam despite old age attended the Celebrations throughout the day. She complimented the Director and staff of CPRI for appreciably remembering her late husband.

Ramanujam Award for potato R&D to Dr Khurana

Dr SM Paul Khurana, Director, CPRI, Shimla has bagged the first Dr S Ramanujam Award for his contributions towards potato research and development as Project Co-coordinator, All India Coordinated Potato Improvement Project (1996-2002). The award carries Rs.50,000/- in cash, a citation and a certificate. The award



Dr Khurana receiving award

was presented to him on 2nd October, 2003 at the Ramanujam Birth Centenary Celebrations at CPRI, Shimla by both Mrs. Ramanujam and Dr. Mangla Rai, DG, ICAR. The Ramanujam Award was approved by the ICAR and is administered by CPRI for which endowment funds were provided by the family members of Dr. Ramanujam. In all, nine applications (comprising 36 scientist) were received for this award and ICAR constituted a high committee of 3 judges of prominence in the field for this award.

Symposium on Potato

CPRI in collaboration with Indian Potato Association organized a Symposium on Potato Research towards National Food and Nutritional Security on 2-3 October, 2003. The Symposium was inaugurated by Dr G Kalloo, DDG (H), ICAR. The Key Note address "Role of Potato



Inaugural Session of Symposium



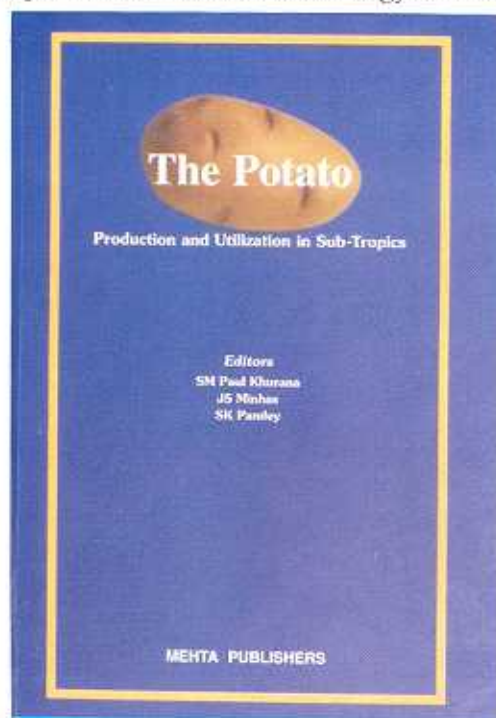
Dr Mangla Rai delivered Key Note Address

in Food and Nutritional Security" was delivered by Dr. Mangla Rai, DG, ICAR at the evening session, since he could not make it to grace the inaugural morning session. The symposium was cosponsored by National Horticultural Board and National Horticultural Research & Development Foundation and supported by M/s Chambal Agritech and Fritolay India Ltd. Seventeen lead papers were presented orally in the Symposium while about 100 papers were presented through posters on almost all aspects of potato R & D. Other prominent guests at

the Symposium were: Dr Kirti Singh, Dr KL Chadha, Dr LC Sikka, Dr UC Sharma, Dr BS Chundawat, Chairman RAC besides DG & DDG (H).

Book on Potato Released

A book entitled "The Potato: production and utilization in sub tropics" was released on 2nd October, 2003 by the DG, ICAR, Dr. Mangla Rai on the occasion of National Symposium and Ramanujam Birth Centenary. It will serve as a text book to the students and a reference book to the researchers. The book was published by M/s Mehta Publishers, Naryana, New Delhi. The book contains 43 chapters on almost all aspects of potato right from history, botany, breeding, production and utilization including marketing, value addition, biotechnology and storage.



CPRI publications released

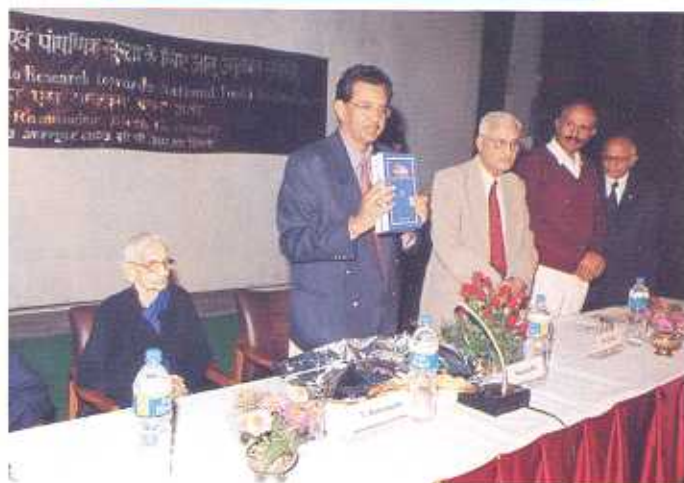
At the National Symposium on Potato Research, CPRI released four publications i) *Alu ke Byanjan* ii) *Alu ke paushtik avam aushdiya gun*, iii) *Bidhayan ke liye alu ka utpadan* and iv) *Potato chip colour cards*.



Release of Technical bulletin-Alu ke Byanjan

Training programmes in NEH region

CPRI has been paying special attention towards the development of potato in North-eastern states. The Govt. of India has sanctioned a scheme "Integrated Development of Horticulture in North-eastern states including Sikkim" nick named as Mini Mission-I. Our Shillong station is one of the cooperating centres of the scheme. Under this scheme seven training programmes were organized for the potato farmers & extension workers during 2002-03. During 2003, five training programmes have just been organized. One training for farmers of Sikkim was arranged on 10th -11th December, 2003 at State farm Okhare & Rabdi (Sikkim), a training for extension officer of NE states on 14th -15th December, 2003 at CPRS Shillong, farmers training at Shillong, on 16-17 Dec, 2003 at AAU



Dr Mangla Rai, DG, ICAR, releasing the book



Farmers of NE states at a field demonstration at Imphal (Manipur)

Jorhat on 19th – 20th December, 2003 and farmers training at ICAR Research Complex Agartala on 22nd – 23rd December, 2003 were organized. Farmers of Nilgiri were also trained by CPRS, Muthorai in August, 2003.

Dr Sarjeet Singh & Dr PS Naik visit Belarus

Dr Sarjeet Singh, Head, Seed Technology and Dr PS Naik, Principal Scientist (Biotechnology) under the bilateral programme visited Minsk (Belarus) from 7-10 July, 2003 to study the Belarusian experience of growing potatoes free of viruses.

Team of resource persons from CPRI to Afghanistan

The International Potato centre (CIP) had organized a training course on potato production for the scientists of Afghanistan during 14th – 17th September, 2003. A team of 3 scientists namely Dr Sarjeet Singh, Head, Seed Technology, Dr SK Pandey, Head, Crop Improvement and Dr PS Naik, Principal Scientist visited Kabul (Afghanistan) as resource persons and imparted training on virus management, introduction of varieties and tissue culture techniques for seed production respectively at the training course.

CPRS Ooty

The Central Potato Research Station at village Muthorai, Ooty (Tamilnadu) established in 1957 to contain cyst nematode as per quarantine legislation imposed by the Govt. of India, to breed cyst nematode and late blight resistant cultivars and also to evolve management practices for nematodes and late blight has done commendable work. Besides, the station is producing quality seed of recommended varieties for distribution within the Nilgiri region. The station has earned reputation of being a research station on potato in South India. Recently the accomplishments of the station were published in the local Tamil dailies and even telecast on the Sun Television Network.

Dr Chaudhary visits Ooty

Dr. JB Chaudhary, former Chairman ASRB and Chairman of High Powered Committee to evaluate the agricultural research in India paid a visit to CPRS, Muthorai, Ooty on 18th October, 2003. He had detailed discussions with the scientists of the station about potato R&D in Tamilnadu.

Record seed production at Ooty and Jalandhar

In 2003 Summer season, Ooty station of CPRI had a record production of 121.71 tonnes of quality seed of recommended cultivars from an area of 4.95 hectare land (yield 24.5 t/ha). Jalandhar station recorded 24.2 t/ha yield of breeder seed this year.

Ph.D Degree

Mrs K Manorama, Scientist (Ag.) of CPRS, Ooty was awarded Ph.D degree by Tamilnadu Agricultural University, Coimbatore — Congratulations.

NAAS Fellowship to Dr PS Naik

Dr PS Naik, Principal Scientist (Biotechnology) has been honoured with the fellowship of the National Academy of Agricultural Sciences. Prior to Dr. Naik, Dr GS Shekhawat, Dr SM Paul Khurana and Dr. Jai Gopal from CPRI have received this honour.

- Drs SP Trehan, RC Sharma & HC Sharma received Best Paper award for a paper published in J. Ind. Potato Assoc. Vol. 28, 2001.

Foreign visits of the Director

Dr SM Paul Khurana, Director, CPRI visited the Netherlands as a member of Indian delegation during 30th June to 3rd July, 2003 for participation in the meeting of Indo Dutch Group on Phytosanitation in Agriculture. Dr Khurana also accompanied Dr. Mangla Rai, DG, ICAR, on a visit to UK to see British Potato Expo and discuss matters of mutual interests during 28th August to 3rd September, 2003 on the invitation of UK Govt. Again Dr Khurana was invited by the United States Deptt of Agriculture for participation in a Potato Workshop at Beltsville Agricultural Station during 2-5 Dec., 2003.

Trainings of State Deptt Officers

The Punjab States Marketing Federation (MARKFED) sponsored 20 field officers of Agri. Export Zone (Potato) to a specially organized training at Shimla for two days on 28th–29th July, 2003 on the latest production technology of potato. The Agriculture Department of HP Govt. had sponsored 40 extension Officers for the training



A group of trainees from MARKFED with resource persons at Shimla



on latest technology of potato production conducted in two batches of 20 trainees each on 25th -26th August, and 28th-29th August, 2003. at CPRI, Shimla.

Department of Horticulture, Govt. of Uttaranchal also deputed its 10 officers for training in potato cultivation organized at CPRIC, Modipuram during 24th-29th November, 2003.

A training on Seed Production was organised at CPRS, Jalandhar on 9 December 2003 for the officers of Punjab State Seed certification Authority and NSC. Scientist from CPRS, Jalandhar had also imparted training to farmers at Nabha (Punjab) sponsored by Fritolay India on 26 September, 2003.

Xth Plan EFC Memo

The Xth Plan EFC memo of CPRI (2002-03 to 2006-07) has been cleared by the PIM cell of ICAR with an Plan outlay of Rs.1505.00 lakh providing Plan support to the ongoing programmes of the Institutes. A sum of Rs.10 million has been sanctioned for setting up of a Potato Seed Production Station at Ghazipur (UP).

IMC Meeting

Institutes Management Committee meeting was held on 18th July at CPRI, Shimla.

RAC Meeting

Research Advisory Committee of CPRI met on 21st - 22nd August, 2003 at CPRI, Shimla under the Chairmanship of Dr B S Chundawat. The other members of RAC who attended the meeting were Dr VS Jaiswal, Dr Karam Singh and Dr N Nath.

Biosafety Committee Meeting

The fourth meeting of Institute Biosafety Committee was held on 10th November, 2003 at CPRI, Shimla attended by all the members. The meeting took stock of developments made in transgenic development.

Modern Seed Pathology laboratory

An well equipped modern Seed Pathology laboratory was inaugurated by Dr. Mangla Rai, DG, ICAR on 2nd October, 2003 at CPRI, Shimla. This laboratory has eight rooms housing the Tuber indexing lab, ELISA testing lab, and micro propagation lab with modern virus detection facilities like Immune ELISA, walk away system etc. besides essential equipment for micro propagation. This laboratory will rapidly multiply healthy microtubers, minitubers to be integrated into stages of breeders seed.



Innauguration of Seed Pathology Lab by DG, ICAR



Dr Mangla Rai inspecting an equipment at Seed Path. Lab

Kisan Mela at CPRI

The Institute in collaboration with All India Radio Shimla has successfully conducted a farmer's training in the form of Potato School on Radio from 28th May to 2nd September, 2003. Under this programme, 25 talks on various aspects of potato cultivation with reference to Himachal Pradesh were delivered by the scientists of the Institute. Farmers of the state were mobilized to get them registered for this programme. More than 100 farmers got themselves registered for this unique programme and seven farmers got awards after the post programme evaluation.



Award winning farmers at Kisan Mela

On the concluding day of the programme a Kisan Mela was organized by the Institute on 31st August, 2003 at CPRI, Shimla which was attended by 97 registered farmers. The radio talks delivered over AIR Shimla have also been printed in a book form entitled as "*Alu ki vaigyanik Kheti*" which was released during the Kisan Mela and copies given free to farmers present and distributed later on to the rest of the farmers.

Personnel

Appointments

- Dr Mukesh Kumar Jatav as Scientist wef 25.8.2003 at CPRI Shimla.
- Smt. G.V.V Shymala Jyoti as Scientist (Computer) wef 20.9.2003 at CPRI Shimla.
- Dr MA Khan as Scientist wef 26.8.2003 at CPRI Shimla.
- Dr RS Meena as Scientist wef 23.8.2003 at CPRI Shimla.
- Dr KM Nagraj as Scientist wef 25.8.2003 at CPRS, Shillong.
- Dr G Suresh Janardhan as Scientist w.e.f 8.8.2003 at CPRI Shimla.
- Sh Roopp Lal joined as Driver wef 17.11.2003 at CPRI, Shimla.

Retirements

- Sh Tota Ram, SS Gr. III, CPRS, Kufri on 31.7.2003.
- Sh. Babu Ram, Asstt. (Voluntary Retirement), CPRI, Shimla on 1.8.2003.
- Sh. SR Yadav, Sr. Librarian, CPRI, Shimla on 31.8.2003.
- Sh. Joginder, SS Gr. III, CPRS, Jalandhar, on 31.8.2003
- Sh. JS Bhatia, Asstt. CPRI, Shimla on 31.10.2003.



Farewell to Shri SR Yadava

- Sh Faqir Singh, SS Gr. II, CPRS, Jalandhar, on 30.11.2003.
- Sh Vishal Mani, SS Gr. IV, CPRI, Shimla on 30.11.2003
- Sh Dhani Ram, Dirver (T-4), CPRI, Shimla on 30.11.2003.
- Sh Mast Ram, Driver(T-4), CPRI, Shimla on 31.11.2003.

Promotions

- Sh Tulsi Ram, Sr. Clerk to Asstt. CPRI, Shimla w.e.f 6.8.2003.
- Sh Joginder Prasad, Sr. Clerk to Asstt. CPRI, Shimla w.e.f 1.11.2003.
- Smt Meena Verma, Jr Clerk to Sr Clerk CPRI, Shimla w.e.f 7.8.2003.
- Sh Om Prakash, Jr Clerk to Sr Clerk, CPRI, Shimla.

Resignation

- Sh. Joginder Singh, T-II-3 (Lib. Asstt.) resigned from CPRI, Shimla w.e.f 28.10.2003 (AN).

Death

Sh. Ishwar Dass, Asstt. CPRI, Modipuram, on 27.10.2003.

SRC Meeting

The Staff Research Council meeting was held at CPRI, Shimla on 18th-20th August, 2003 and attended by 63 Scientist from HQ and Regional stations. The research programmes were reviewed at the meeting on the basis of presentations made by programme leaders.



MD Azariah block at Muthorai

The old office building at CPRS, Muthorai, Ooty was named after Dr. MD Azariah who served the station for 19 years as scientist-in-charge and was instrumental in developing the station during its formative years.

Infrastructure Development

Administrative Building: The construction of a new administrative building sanctioned in IX Plan at the cost of over Rs. 10 million is fast coming up at CPRI, Shimla. The building is likely to be completed by the end of summer, 2004. This three storey building will house the sections viz. Establishment, Accounts, Audit, Stores, Work & Estate while ground floor to be used as vehicle parking. The acute problem at the Institute of proper sitting and parking is likely to end with the completion of the building.

Tiles fixations: Interlocking tiles have been fixed on the path from main gate to the main lab building and also chequered tiles have been fixed in the residential colony of CPRI.

Games & Sports: There were almost no facilities for games & sports at the Institutes. During the year, a volley ball ground, and one badminton court were developed and new table tennis table and other accessories procured.

Seed Health Laboratory: A new seed health laboratory has also been built in a record time and started functioning. This laboratory was inaugurated by the Director-General, ICAR, Dr. Mangla Rai on 2nd October, 2003.

Water Supply: Shimla municipal water supply is not enough to meet the Institutes needs particularly during summers. But at the Institute by boring 400 feet deep potable water is now available through the tubewell and a 60 thousand liter tank has also been developed.

Equipment: Modern walk away system, ELISA readers and fully computerized equipment have been added to the seed health testing laboratory.

Poly House: Poly Houses have been erected at Shimla, Kufri, Gwalior, Modipuram, Shillong and Muthorai, Ooty for research activities.

Renovation of building: An old building at CPRS, Kufri perhaps built in 19th Century by the Britishers known as Lister House has been renovated at a cost of Rs. 24,06,650.

Rain water harvest pond at CPRS Ooty was deepened by 4 meters and widened to cover 700 m² area.

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Polyhouse at CPRS, Ooty

Tissue Culture lab at Shillong: A tissue culture laboratory has been completed at CPRS, Shillong and it has started working.

Storage: At Shimla a 10 tonnes capacity walk-in-chamber for storage of potatoes under 10-20°C has been built and is functioning well.

JSPS fellowship to Dr Jai Gopal

Dr Jai Gopal, Principal Scientist (Genetics) was awarded fellowship of Japan Society for Promotion of Science (JSPS) for carrying out research for 60 days at the University of Hokkaido, Sapporo (Japan) from 16 October to 15 December, 2003. JSPS fellowships is known as one of the prestigious fellowships awarded for scientific research. Two scientists from CPRI viz. Dr SM Paul Khurana (now Director) and late Dr RK Birmhan had received this fellowship earlier.

Dr PS Naik to visit CIP unber NATP-HRD

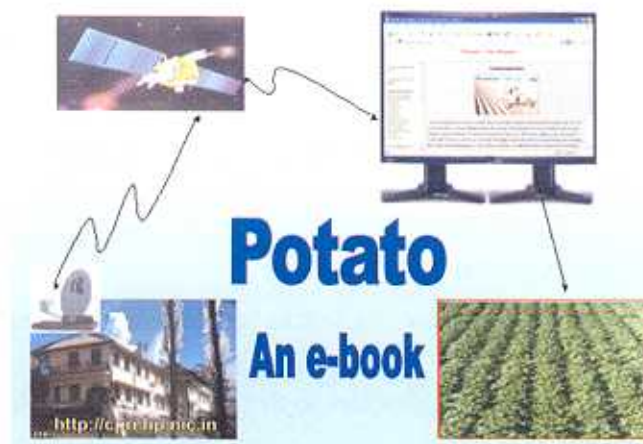
Dr PS Naik, Principal Scientist (Biotechnology) has been selected to undergo training at the International Potato center (CIP), Lime (Peru) for 3 months in the field of biotechnology under NATP.

Award money enhanced

The cash amount of Dr S Ramanujam award was previously fixed at Rs. 40,000/- to be given once in four years. On the request of the family members of late Dr S Ramanujam, the award money has been enhanced up to 50,000/-. Family members of Dr S Ramanujam earlier contributed Rs. 1,49,000/- as the endowment and again remitted Rs. 20,000/- so that Rs. 50,000/- cash may be given with the award once in four years out of interest earned on the endowment.

Potato E-Book

An e-book on potato has been prepared by the institute and has been hosted on the CPRI website. The e-book gives a birds eye view of practical knowledge about



potato-cultivation and its utilization in India. Emphasis has been given on keeping the text without much scientific jargon. The text has been illustrated as much as possible. It is hoped that this e-book would supplement the printed material brought out by the institute from time to time. Naturally this e-book will have wider access through the internet.

Sports Meet at CSSRI Karnal, CPRI excels

CPRI sports team which participated in the Zonal Sports Meet of ICAR at CSSRI, Karnal bagged six gold and 2 bronze medals in the various events and stood third in the medal tally among 700 participants from 22 institutes of ICAR. The notable winner were: Mrs.



CPRI sports contingent

Shyamlata Bekta first in woman's shot put, discuss throw and javelin throw and third in long jump. Mrs Tarvinder Kochhar bagged three gold in 100 meter, 200 meter races and high jump. In the 400 meter race, Dr RS Meena came at third position. Sh. Surender Singh was adjudged the best Badminton player in the tournament and earned appreciations for his bright performance.

The team on return to Shimla was warmly welcomed by the Director and other staff of the Institute. The facilities for games & sports at the Institutes or at the regional station are almost nil even then the performance of the team was impressive. At the HQ at Shimla facilities for volley ball, badminton and TT have been provided and there are plans to create such facilities at the regional stations also in future.

Visit of USDA Scientists

Dr. VR Reddy and Mrs. RE Johnson from United States Department of Agriculture (USDA) visited CPRI



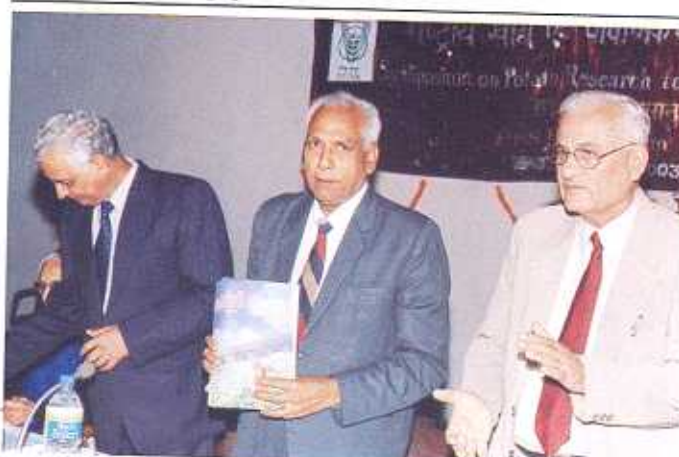
Dr SM Paul Khurana, Director, CPRI, briefing the BARC, ARS USDA scientists from Beltsville (USA)

on 18.10.2003. They showed interest in the research on potato being carried out at CPRI and collaboration with USDA in the fields of mutual interest. Impressed by the commendable work done by the CPRI, several foreign research organisations from USA, UK and the Netherlands are willing to collaborate with CPRI.

**HAPPY NEW YEAR
2004**

Processing of Potatoes

With the increased potato production, diversification of a part of produce needs to be processed into other forms so as to avoid gluts and distress sale. CPRI has been working on this aspects. A first set of processing varieties Kufri Chipsona 1 and 2 were developed. It is heartening to note that cultivation of Chipsona varieties is on increase. Another hybrid HT-92-621 which was recently recommended for release apart from being heat tolerant is very much suitable for processing as French fries. There was a complaint from potato processors that Indian varieties were not suitable for French fries processing. This hybrid will certainly fill the gap.



Release of Kheti Special Issue on potato by Dr Kirti Singh on 2 October, 2003



Release of Chip Colour Card Album by Dr BS Chundawat on 2 October, 2003

Dear Readers

We are making all efforts to bring out Potato news letter timely. We seek your cooperation by way of contributing articles, features, success stories and news items related to potato R&D. Please keep on sending material for the newsletter.

Wish you all a happy new year 2004.

Editor

Potato Varieties monument

At the approach path of main building of CPRI, a monument of potato varieties released by CPRI with their year of release has been erected which was inaugurated by Dr Mangla Rai, DG, ICAR on 2 October 2003.



Unveiling of varieties monument by the DG

Bust of Dr Ramanujam installed at CPRI

To mark the birth centenary of Dr Ramanujam, the founder Director of CPRI his bust was installed at CPRI Shimla which was unveiled by Mrs Ramanujam on 2 October, 2003.



Mrs Ramanujam and other family members after unveiling of the bust

Symposium publications by IPA

On the occasion of the Symposium on Potato Research towards National Food and Nutritional Security and Ramanujam Birth Centenary, Indian Potato Association has brought out a Souvenir and special issue of the Journal of India Potato Association released by Mrs Vedam Ramanujam and Dr G Kalloo respectively on 2 October 2003.



Mrs Ramanujam releasing the Souvenir



Dr Kalloo releasing special issue of JIPA

संस्थान में हिन्दी चेतना मास का आयोजन

भारत सरकार की राजभाषा नीति के कार्यान्वयन व उसके प्रभावी प्रयोग में गति लाने तथा संस्थान के कर्मचारियों में हिन्दी के प्रति जागरूकता पैदा करने के उद्देश्य से हर वर्ष अनेक कार्यक्रम आयोजित किए जाते हैं। इस वर्ष भी संस्थान में 14 सितम्बर से 13 अक्टूबर, 2003 के दौरान हिन्दी चेतना मास का आयोजन किया गया। कार्यक्रम का शुभारम्भ संस्थान के निदेशक डा. सत्येन्द्र मोहन पॉल खुराना ने किया। इस अवसर पर बोलते हुए उन्होंने कहा कि हिन्दी एक सशक्त भाषा है, इसका प्रवाह सरिता की भांति है। परन्तु आजादी के 56 वर्षों के बाद भी हिन्दी को अपेक्षित दर्जा नहीं मिल पाया है। उन्होंने कर्मचारियों से आग्रह किया कि वे हीन-भावना को छोड़कर राष्ट्र के भविष्य तथा

आत्म सम्मान के लिए अपना सरकारी कार्य हिन्दी में ही करे।

इस पूरे आयोजन को तीन अलग-अलग कार्यक्रमों में विभाजित किया गया। पहले सप्ताह में संस्थान के अलग-अलग वर्गों के कर्मचारियों व अधिकारियों के

लिए हिन्दी कार्यशालाएं आयोजित की गईं। इन कार्यशालाओं में सबसे पहले संस्थान के वरिष्ठ लिपिकों व सहायकों को शामिल किया गया। उन्हें सुस्पष्ट भाषा में हिन्दी नोटिंग एवं ट्राइप्टिंग का अभ्यास करवाया गया तथा उन्हें भारत सरकार की राजभाषा नीति तथा उससे संबंधित जानकारी दी गई। इसके अतिरिक्त कनिष्ठ लिपिकों, आशुलिपिकों, तकनीकी कर्मचारियों, वैज्ञानिकों, अधिकारियों एवं सहायक कर्मचारियों के लिए भी अलग-अलग कार्यशालाएं आयोजित की गईं और उन्हें भी भारत सरकार की राजभाषा नीति के साथ-साथ कार्यालय में रोजमर्रा के इस्तेमाल

होने वाले वाक्यांशों, प्रोफार्मा भरने, मानक मसौदे तैयार करने, कार्यालय आदेश, परिपत्र तथा दैनिक पत्राचार में हिन्दी का प्रयोग करने के बारे में जानकारी दी गई।

दूसरे सप्ताह में संस्थान में निबंध, चित्र कहानी, हिन्दी संख्यावाचक शब्दों का उच्चारण व शब्दकोश-निर्धारण प्रतियोगिता के साथ-साथ टिप्पण एवं प्रारूप लेखन, प्रश्नमंच जैसी प्रतियोगिताएं आयोजित की गईं।

शेष पन्द्रह दिन यह देखा गया कि संस्थान के कर्मचारी हिन्दी में कैसा काम कर रहे हैं। इस दौरान कर्मचारियों को हिन्दी में काम करने में आने वाली दिक्कतों का समाधान भी किया गया।



हिन्दी चेतना मास के दौरान विभिन्न प्रतियोगिताओं के विजेता निदेशक के साथ

हिन्दी चेतना मास का समापन संस्थान के सभागार में 13 अक्टूबर, 2003 को किया गया। इस आयोजन में संस्थान के मुख्यालय के सभी कर्मचारी/अधिकारी आमन्त्रित थे। इस कार्यक्रम में संस्थान के निदेशक डा. सत्येन्द्र मोहन पॉल खुराना बतौर मुख्य अतिथि उपस्थित

हुए। सभा को सम्बोधित करते हुए उन्होंने कहा कि राष्ट्रभाषा को अपनाकर ही देश प्रगति के पथ पर आगे बढ़ सकता है और इसी भाषा को अपनाकर वैज्ञानिक खोजों को किरानों तक पहुंचाया जा सकता है।

इस अवसर पर बोलते हुए संस्थान के सहायक निदेशक (राजभाषा) ने इस बात पर जोर दिया कि 'क' क्षेत्र होने के नाते हम समस्त कर्मचारियों का यह उत्तरदायित्व है कि हम संस्थान से जारी होने वाले पत्रों को यथाराम्य हिन्दी में ही भेजे। उन्होंने कहा कि राजभाषा अधिनियम 1963 की धारा 3(3) के अन्तर्गत आने

बाले दस्तावेजों को द्विभाषी रूप में जारी करें ताकि भारत सरकार द्वारा निर्धारित लक्ष्यों की प्राप्ति की जा सके।

इस अवसर पर हिन्दी में सराहनीय कार्य करने के लिए संस्थान के अभियंत्रण अनुभाग, फसल सुधार संभाग तथा सामाजिक विज्ञान सभाग को प्रथम, वाहन नियंत्रण कक्ष एवं स्टाफ वेलफेयर एसोसिएशन को द्वितीय तथा निर्माण एवं सम्पदा अनुभाग व लैब यूनिट को तृतीय पुरस्कार दिया गया। हिन्दी में योगदान के लिए श्री जगदम्बा प्रसाद उनियाल एवं श्री रोशन लाल चौहान को भी सम्मानित किया गया। हिन्दी चेतना मास के दौरान आयोजित विभिन्न प्रतियोगिताओं में प्रथम, द्वितीय व तृतीय स्थान पर रहे अधिकारियों व कर्मचारियों को स्मृति चिन्ह तथा प्रशस्ति पत्र प्रदान किए गए। हिन्दी नोटिंग एवं ड्राफ्टिंग प्रतियोगिता में श्रीमति पूनम सूद, श्री जोगिन्द्र प्रसाद श्री जोगिन्द्र सिंह ठाकुर क्रमशः प्रथम, द्वितीय व तृतीय, चित्र कहानी प्रतियोगिता में श्री सचिन कंवर, श्री धर्मेन्द्र गुप्ता व श्री जोगिन्द्र सिंह ठाकुर क्रमशः प्रथम, द्वितीय व तृतीय शब्द निर्धारण एवं अंकों का उच्चारण प्रतियोगिता में श्री हीरा नन्द शर्मा, कुमारी सोनू व कुमारी डैशी छाबड़ा एवं श्री इस्लाम अहमद क्रमशः प्रथम, द्वितीय व तृतीय, प्रश्नमंच प्रतियोगिता में श्री अनंन कुमार शर्मा, श्री हीरा नन्द शर्मा एवं श्री राम स्वरूप नीणा व श्री इस्लाम अहमद क्रमशः प्रथम, द्वितीय व तृतीय तथा निबंध प्रतियोगिता में श्री मति तरविन्दर कोच्छड़, कुमारी रुमा राय व श्री सचिन कंवर क्रमशः प्रथम, द्वितीय व तृतीय स्थान पर रहे।

हिन्दी चेतना मास के दौरान आयोजित कार्यशालाओं व प्रतियोगिताओं के सफल आयोजन के लए श्री प्रवीन चांदला, श्री राम सरूप कपूर, श्री सुरेश कुमार, श्री चार्ल्स एक्का, डा. शिव कुमार व डा. राजेश कुमार राणा को भी सम्मानित किया गया।

संसदीय राजभाषा समिति का ऊटी दौरा

केन्द्रीय आलू अनुसंधान केन्द्र, मुत्तौराई में इस वर्ष 2-3 सितम्बर, 2003 को माननीय संसदीय राजभाषा की निरीक्षण आलेख एवं साक्ष्य समिति ने हिन्दी कार्य का निरीक्षण किया। इसके तत्काल बाद 3 नवम्बर, 2003 को माननीय संसदीय राजभाषा समिति ने इसी केन्द्र का दोबारा निरीक्षण किया। इस समिति में लोकसभा के दो सांसद उपस्थित थे। इस अवसर पर संस्थान के निदेशक डा. सत्येन्द्र मोहल पॉल खुराना सहित मुत्तौराई केन्द्र के अध्यक्ष डा. के. एस. कुणाप्रसाद, परिषद के निदेशक (हिन्दी) श्री अनिल कुमार दुबे, वरिष्ठ प्रशासनिक अधिकारी श्री



ऊटी में संसदीय राजभाषा समिति की बैठक (ऊपर) आलू उत्पाद प्रदर्शनी का अवलोकन करते सदस्य (नीचे)

चार्ल्स एक्का, सहायक निदेशक (राजभाषा) श्री प्रवीन चांदल, डा. टी. ए. जोसफ, डा. के मनोरमा ने इस बैठक में भाग लिया। इस अवसर पर आलू के उत्पाद व संस्थान द्वारा हिन्दी के प्रकाशनों की एक प्रदर्शनी भी लगाई गई। माननीय समिति के सदस्यों का स्वागत करते हुए डा. प्रसाद ने मुत्तौराई केन्द्र के क्रिया-कलापों व केन्द्र द्वारा किए गए हिन्दी कार्यों का ब्योरा प्रस्तुत किया। इस अवसर पर डा. प्रसाद ने माननीय समिति को आश्वासन दिए कि वह अपने केन्द्र में राजभाषा नियमों तथा राजभाषा अधिनियम, 1963 की धारा 3(3) का अनुपालन करने की दिशा में कार्य करेंगे।

के.आ.अ.सं. परिसर, मोदीपुरम में हिन्दी पखवाड़ा

संस्थान के मोदीपुरम स्थित परिसर में 15 से 10 सितम्बर के दौरान हिन्दी पखवाड़े का आयोजन किया गया। इसके अन्तर्गत आशुभाषण, प्रश्नोत्तरी, निबन्ध, भाषण तथा काव्य पाठ प्रतियोगिताएं

आयोजित की गई। प्रत्येक प्रतियोगिता में भाग लेने वाले प्रतिभागियों को उनके उत्कृष्ट प्रदर्शन के आधार पर प्रथम, द्वितीय व तृतीय पुरस्कार दिए गए। समापन समारोह के अवसर पर श्री रवि राघव फल्लचपुर निवासी को बतौर मुख्य अतिथि बुलाया गया। प्रतियोगिता के परिणाम इस प्रकार रहे – आशुभाषण में श्री मैराजुल हक, श्री राजय रावल, श्री दिनेश सिंह क्रमशः प्रथम, द्वितीय व तृतीय, प्रश्नोत्तरी में श्री रणजीत सिंह व सहायोगी, प्रथम श्री एन. के. गुप्ता एवं सहयोगी द्वितीय, निबन्ध लेखन में श्री मैराजूल हक, श्री राजेश कुमार, डा. दिनेश कुमार क्रमशः प्रथम, द्वितीय व तृतीय, भाषण में मैराजुल हक, श्री दिनेश सिंह, डा. नेम सिंह क्रमशः प्रथम, द्वितीय व तृतीय तथा काव्य पाठ में डा. प्रवीन कुमार गुप्ता, श्री ओमवीर सिंह, श्री उदयवीर सिंह क्रमशः प्रथम, द्वितीय व तृतीय स्थान पर रहे।

कार्यक्रमों का संचालन परिसर के संयुक्त निदेशक डा. बी.पी. सिंह की अध्यक्षता में श्रीमति कुसुम सिंह, हिन्दी अनुवादक द्वारा किया गया।

के. आ.अ.के., ग्वालियर में हिन्दी पखवाड़ा

संस्थान के ग्वालियर स्थित केन्द्र में 15 से 30 सितम्बर, 2003 के दौरान हिन्दी पखवाड़ा धूमधाम से मनाया गया। इस अवसर पर केन्द्र में विभिन्न प्रतियोगिताएं आयोजित की गईं। इन प्रतियोगिताओं के आयोजन बावत केन्द्र में दो समितियां गठित की गईं और समिति के निर्णय अनुसार निबन्ध प्रतियोगिता में श्री संजय कुमार शर्मा (प्रथम), श्री राकेश सिंह (द्वितीय) तथा तत्काल भाषण प्रतियोगिता में श्री संजय कुमार शर्मा (प्रथम), डा. बीरबल (द्वितीय), श्री एस. आदिमूलम (तृतीय) स्थान पर रहे।

हिन्दी कार्यशालाओं में संस्थान की भागीदारी

1. नेशनल इन्स्टीट्यूट ऑफ पब्लिक अडमिनिस्ट्रेशन, बेंगलूर द्वारा माननीय संसदीय राजभाषा समिति की निरीक्षण प्रश्नावली भरने के लिए आयोजित दोदिवसीय कार्यशाला में संस्थान के सहायक निदेशक (राजभाषा) श्री प्रवीन चांदला ने भाग लिया। इस कार्यशाला का आयोजन दिल्ली के सम्राट/अशोक होटल में 14-15 नवम्बर, 2003 को किया गया।

2. राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा राष्ट्रीय सूचना विज्ञान केन्द्र, चण्डीगढ़ में आयोजित हिन्दी में कम्प्यूटर का आधारभूत ज्ञान विषय पर आयोजित दो अलग-अलग

5 दिवसीय प्रशिक्षण कार्यक्रम में संस्थान के श्री दीप राम, श्री संदीप वर्मा एवं कुमारी डैशी छाबड़ा ने प्रशिक्षण ग्रहण किया।

3. केन्द्रीय आलू अनुसंधान केन्द्र, जालन्धर की श्री संध्या कपिला ने राजभाषा विभाग द्वारा पत्राचार पाठ्यक्रम के माध्यम से हिन्दी टाइपिंग का प्रशिक्षण ग्रहण किया तथा उन्होंने यह परीक्षा उत्तीर्ण की।

हिन्दी प्रकाशन

राष्ट्रभाषा हिन्दी में वैज्ञानिक शोध एवं जानकारी हिन्दी में देने के उद्देश्य से संस्थान ने वर्ष 2003 में हिन्दी प्रकाशनों में एक क्रीर्त्तीमान स्थापित किया है वार्षिक रिपोर्ट, न्यूजलैटर व हिन्दी वार्षिक समाहित के प्रकाशन के अलावा आलू अनुसंधान में प्रयुक्त अंग्रेजी शब्दों के (लगभग 5000 शब्दों) हिन्दी अनुवाद के रूप में एक कृषिशब्दावली का प्रकाशन किया गया इसके अलावा आलू के व्यंजन (तकनीकी पुस्तिका) विधायन के लिये आलू का उत्पादन, आलू के पौष्टिक एवं औषधीय गुण व आलू की वैज्ञानिक खेती (प्रसार पुस्तिकाओं) का प्रकाशन भी किया गया। वर्ष में हिन्दी में छः प्रकाशन निकाले गये।



आलू की वैज्ञानिक खेती का विमोचन
अवसर: किसान मेला 31 अगस्त, 2003

**नव वर्ष
मंगलमय
हो !**

नराकास, शिमला द्वारा आयोजित प्रतियोगिताएं

नगर राजभाषा कार्यान्वयन समिति, शिमला द्वारा हर वर्ष की भांति इस वर्ष भी हिन्दी समारोह का आयोजन किया गया। समिति द्वारा आयोजित प्रतियोगिताओं में शिमला स्थित केन्द्रीय सरकार के कार्यालयों, बैंकों, उपक्रमों आदि के कर्मचारियों ने भाग लिया। इन प्रतियोगिताओं में संस्थान के श्री सुरेश कुमार, आर्शलिपिक का हिन्दी कम्प्यूटर टाइपिंग में द्वितीय, चित्र कहानी प्रतियोगिता में कुमारी वैशी छाबड़ा, कनिष्ठ लिपिक, तृतीय तथा प्रश्नमंच प्रतियोगिता में संस्थान के श्री चन्द्र मोहन सिंह बिष्ट व श्री अर्जुन कुमार शर्मा की जोड़ी ने तृतीय पुरस्कार अर्जित किया। उन्हें ये पुरस्कार शिमला में 10 दिसम्बर, 2003 को कालीबाड़ी हॉल में आयोजित समारोह में हिमाचल प्रदेश के महामहिम राज्यपाल श्री विष्णु सदाशिव कोकजे ने प्रदान किया। आशुभाषण प्रतियोगिता व प्रश्नमंच प्रतियोगिता के आयोजन का कार्यभार इस संस्थान को सौंपा गया।

Potato Fest at Modipuram

An International Seminar-cum-Potato Fest on processing and export will be organised at CPRIC, Modipuram on 14-15 March, 2004.

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Happy New Year

LET US RESOLVE TO WORK HARD IN THE COMING YEAR FOR BETTER RESULTS

From page 2... **Organic potato....**

leguminous green manure crops, *Dhaincha* when grown in saline/alkali soils improves soil pH. Sunnhemp can preferably be grown in neutral soil. In addition to green leaf manuring can also be done.

Vermicompost: Earth worms play a vital role in maintaining soil quality and managing efficient recycling. Developing mass earth worm culture (viz. production, vermi composting and commercializing live material) is popularly known as vermi culture. It has been observed that 1800 worms (ideal for one sq. m) can feed on 80 tonnes of humus/year. Microbes are primary decomposers while earth worms are secondary decomposers.

Bio-fertilizers: Bio-fertilizer include microbes like bacteria, fungi and algae, which are capable of fixing atmospheric N or convert insoluble phosphate of the soil into forms available to plants. *Rhizobium*, *Azotobacter*, *Azospirillum*, *Frankia*, blue-green-algae etc. are important bio-fertilizers.

Intercropping: Intercropping potato with sugarcane, mustard, pea, lentil etc. increases input efficiency and total productivity of the system. Increase in system productivity intercropped with legumes may be due to nitrogen fixing ability and deeper root system of legumes. Increased efficiency of system intercropped with non leguminous crops might be due to slow initial growth of main crop and its deeper root system utilizing left over nutrients of potato crop and least competition for inputs.

Crop rotation: different crop rotations followed are green manure-potato-wheat, green manure-potato-onion, rice-potato-vegetables, maize-potato etc. Potato being shallow rooted crop and surface feeder leaves nutrients in soil after harvest. Succeeding crops after potato can be grown successfully on residual P and K. Residual P and K content was found sufficient to succeeding wheat crop. Results confirmed that application of only 120 kg N/ha to wheat grown after potato was sufficient to obtain good yield of wheat.