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**Dr Harpreet Singh**

Principal Investigator

Rural Technology Action Group (RuTAG) Centre

**Dated: February 24, 2012**

**Shri S Chatterjee**

**Scientific Consultant and Coordinator**

**Central RuTAG**

**Office of Principal Scientific Advisor to Government of India**

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**Subject: Report of second meeting of RuTAG Centre-IIT Ropar.**

Dear Sir

The second meeting of RuTAG Centre-IIT Ropar held on February 22, 2012 in the institute. Kindly find attached herewith detailed report of the meeting.

Thanking you

With kind regards

**(Dr Harpreet Singh)**

Copy to

- All the participants and State Councils for Science and Technology, Punjab, Himachal Pradesh and Haryana

**A REPORT**

on

**SECOND MEETING**

of

**RURAL TECHNOLOGY ACTION GROUP (RUTAG) CENTRE-IIT ROPAR**

**FEBRUARY 22, 2012**

**(10 am to 4 pm)**

Submitted to

**Office of Principal Scientific Advisor to Government of India**



By

**DR. HARPREET SINGH**

**PI RuTAG Centre**

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**February, 2012**

## REPORT

The second meeting of Rural Technology Action Group (RuTAG) Centre of Indian Institute of Technology (IIT) Ropar held on February 22, 2012 from 10 am to 4 pm in lecture hall L2 of the institute. The following were present in the meeting:

Sr No	Name of the Participant	Official Affiliation/Address	Phone No/Email
1.	Prof P K Raina	Professor-in-charge (A & R), IIT Ropar	09872649720 pkraina@iitrpr.ac.in
2.	Shri S Chatterjee	Scientific Consultant and Coordinator, Central RuTAG, Office of Principal Scientific Advisor to Government of India	09811402194 schatterjee@nic.in
3.	Prof Jagmohan Singh	Sant Baba Bhag Singh Institute of Engineering & Technology , Padhiana, Jalandhar (Pb)	09814001836 jagmohan08@shahidbhagatsingh.in jagmohan08@gmail.com
4.	Dr Sarbjit Singh Kandhari	Chief Agriculture Officer, Hoshiarpur (Pb)	09501207000 kandhari_0313@yahoo.com
5.	Ms Vandana Naithani	Punjab Technical University Kapurthala (Pb)	09501109097 naithanivandana@gmail.com
6.	M. Madan Lal	Kheti Virasat Mission VPO Allowal, District Hoshiarpur (Pb)	09877092162
7.	Sh B K Sharma	DAV Public School, Dhuri, District Sangrur (Pb)	09814122208
8.	Dr Satish Thukral	VPO Makhu, District Ferozepur (Pb)	09417358393
9.	S Harbaksh Singh	VPO Jagatpur District Saheed Bhagat Singh Nagar (Pb)	08427465009
10.	S Upkar Singh	President, Doaba Region Kheti Virasat Mission VPO Chak Desh Raj, Tehsil Phillaur District Jalandhar (Pb)	09463360294
11.	S Jasbir Singh	VPO Ghulal, Tehsil Samrala, District Ludhiana	09592970008
12.	S Manjit Singh	#7305, Street No. 7, Gobind Nagar, Ludhiana	08699474000
13.	S Jaswant Singh	Village Nandan, PO Bassi Purani District Hoshiarpur	01882-272504
14.	S Ashok Kumar	Village Nandan, PO Bassi Purani District Hoshiarpur	08427070875
15.	Sh Rajesh Kumar	Punjab Educational & School Society Cheema	09463705319
16.	Sh Nishant Goyal	Secular Education & Social Society	09780980147
17.	Sh Kuldeep	K.D. Parivar, 61, Model Gram Extension, Kochar Market, Ludhiana-141002 (Pb)	09991887354
18.	Sh Darshan Singh	Village Tanda Jaal, PO Labangarh District Ludhiana (Pb)	09464445633
19.	Dr Snehlata Jaswal	Kusum Arora Memorial Trust Chandigarh	08146396208, 0172-604760 sjaswal@iitrpr.ac.in

20.	Dr Ekta Singla	SMMEE, IIT Ropar	ekta@iitrpr.ac.in
21.	Dr Narinder Singh	Chemistry Department , IIT Ropar	0981525073 nsingh@iitrpr.ac.in
22.	Dr Satwinder Jit Singh	SMMEE, IIT Ropar	09464713600 sjs@iitrpr.ac.in
23.	Dr P Sarkar	SMMEE, IIT Ropar	08699398885 prabir@iitrpr.ac.in
24.	Dr Harpreet Singh	PI, RuTAG Centre, IIT Ropar	09855709052 rutag-iitrpr@iitrpr.ac.in

In addition to the faculty of the institute, 17 members from various NGOs participated in the meeting. The meeting was planned with the following objectives:

- The main objective is the finalize the mechanism for RuTAG working as some projects have already been identified, which include development of organic manure with Kheti Virasat-Anandpur Sahib and design & fabrication of some implements for natural forming as demanded by an NGO at Hoshiarpur (FAPRO)
- To involve State Councils for Science and Technology of Punjab, Haryana and Himachal Pradesh by inviting their representations in the meeting
- To interact with some more NGOs and make them conversant with the objectives and functioning of RuTAG centre of the institute. Last time we have representatives from Kheti Virasat-Anandpur Sahib, Kusum Arora Memorial Trust- Chandigarh, Arpan (NGO)-Ropar, Social Work and Rural Development Centre-Ropar and Guru Arjan Dev Institute of Development Studies- Amritsar. It is proposed to identify some more NGOs and call them for this meeting
- To identify the technological problems with the help of interaction with NGOs during the meeting on which RuTAG can work
- To introduce the new faculty to the objectives and functioning of RuTAG centre of the institute and other S&T institutions so as to encourage them to take participate in the activities of RuTAG

The meeting started with welcome note by Dr Harpreet Singh, followed by introduction to the RuTAG mission by Sh S Chatterjee. He presented a nice introduction to the objectives of the RuTAG centres during the inaugural session. He informed that one of the areas of focus of the Office of the Principal Scientific Adviser to the Government of India is related to the development and dissemination of technologies for rural development. He highlighted the main features of the RuTAG programme such as it is entirely S&T NGO based, avoids grass-root level intervention, non-farm sector preferred, skill up-gradation through specialized training, one-off intervention in very rare cases. He gave a nice presentation on various kinds of product/technology developments done by the various existing RuTAG centres; established in other IITs, one each in Uttarakhand, Tamilnadu, Assam (for NE states), West Bengal and Delhi. RuTAG has linkages with State Governments, R&D Laboratories, Educational Institutions and Corporate Sector/Industry. Some very innovative technology up-gradation projects have been successfully implemented under the programme. RuTAG has some funds to sponsor mini projects based upon the needs of the NGOs, whereas it can also assist to avail major funding from other Govt agencies for bigger projects. Followed by this, Prof PK Raina appreciated the mission of RuTAG and suggested that efforts should be made to engage more and more faculty members to develop technologies for the rural population alongwith students of the institute. He assured that the institute shall extend all the possible cooperation and logistics to support the activities of RuTAG centre. The session ended with vote of thanks by Dr Narinder Singh.

During the main technical session, the participants were requested to express their views with a special emphasis on the technical problems being faced by their respective NGOs. Out of 17 participants, 16 members presented their views in a much elaborated way and showed interest for long-standing collaboration with the RuTAG centre. They gave some very constructive inputs and posed some technical problems for which they asked for RuTAG collaboration. Based upon this interaction and written requests

by Uttam Kheti Self Help Group Hoshiarpur, The Lambra Kangri M/P Co-op Service Society Limited Hoshiarpur, The Allowal Bullowal M/P Co-op Agri. Service Society Limited Hoshiarpur, Farm's Produce Promotion Society Hoshiarpur, the following technology gaps were identified:

- There is generic need for developing agriculture and general purpose tools (small scale machines) which may be hand driven/cattle pulled or cycle driven
- Organic matter measuring kit, health card of soil
- Development and standardization of processes and small scale machinery for processing of various pulses, turmeric, soyabean and fruit juices (kinnows and orange etc) etc so as to maintain nutritional values
- Small scale food processing machines such as biscuit making, spices, sauces
- Handy machines for dispensing fresh oil from cottonseed, mustard etc
- Development of multiple seed sowing implements for intercropping, which may be hand driven/cattle pulled or cycle driven implements
- Small scale waste utilization systems for village garbage (animal waste, plastic etc)
- Development of weeders for deweeding
- Development of implements for mulching of farms
- Manual seed dribbling machines
- Manually or cattle driven trolley mounted spray pumps for orchids, which can spray on plants taller than man
- Low power cattle driven/motorized rippers/harvesters
- Implements to sow maize on ridges in the fields
- Manual/cattle driven or low power pruning and shredding machines for trees
- Cattle and farm yard waste shredder and turner machines
- Grading machines for grains
- Small scale, low cost, small capacity and low power consuming storage equipment/systems
- Economical AC systems for small scale cold stores, may be solar based
- Driers for turmeric power, may be with solar energy
- Food-grade, biodegradable and reusable packaging
- Small capacity pulses cleaning and polishing machines
- Small capacity cold flouring mills
- Bio-preservatives for processed foods
- Analysis of functioning and effects of insecticides, developed from natural sources
- Analysis of functioning and effects of fertilizers developed from natural sources
- Calibration and improvement in various manures, cultures and insect/pest/fungus controllers as a replacement for synthetic chemical in practice
- Cost effective water purifiers for villages
- Cost effective vehicles for farmers to travel small distances such as solar operated or battery operated
- Vaccination syringe crushers
- Domestic machines (home scale) for assisting women to carry out their daily work such washing machines, mopping machines

Need for conducting general awareness programs was also realised such as to make people aware of Zn loss, women empowerment programs through vocational training to start small scale industries such as food processing, vocational training to school children for self-employment, educate the farmers to reduce the use of pesticides, vaccination awareness programs.

The meeting ended with a conclusion that the problems shall now be shared with the faculty of the institute and with main PSA office so as to prepare priority list. The PSA office shall facilitate in some of the

these projects by connecting this centre with other agencies such as BARC, which have developed relevant technologies, so that some of these problems can be solved with existing know-how and technology. Based upon the interest of IIT Ropar faculty and expertise, the relevant NGOs shall be contacted/visited for working out for the solution of some of these problems.

Need to involve State Councils for S&T of Punjab, Himachal Pradesh and Haryana in RuTAG working was also felt and it was decided to request these agencies to have participation in RuTAG activities.

Dr Harpreet Singh thanked all the participants and invited NGOs to come forward and join hands with RuTAG centre so that the objectives of RuTAG could be achieved in an effective manner. He requested that even individual NGOs can visit the centre and discuss their problems in an informal way as and when needed.

Shri Chatterjee concluded the session with a hope that the interaction between NGOs, state councils and RuTAG shall bring fruitful results and expressed his sincere thanks to the participants.

**(Dr Harpreet Singh)**