



FARMER-LED INNOVATIONS

National Workshop on

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PROCEEDINGS & RECOMMENDATIONS

Organized Jointly by:

Haryana Kisan Ayog

Indian Council of Agricultural Research
Chaudhary Charan Singh Haryana Agricultural University
Protection of Plant Varieties and Farmers' Rights Authority
Trust for Advancement of Agricultural Sciences
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On

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Haryana Kisan Ayog

Government of Haryana

CCS Haryana Agricultural University

Hisar-125004

CONTENTS

Foreword	v
Abbreviations	vii
Introduction	1
Inaugural session	2
Technical Session I: Crop Improvement	7
Technical Session II: Livestock, Poultry and Fisheries	9
Technical Session III: Integrated Crop Improvement	11
Technical Session IV: Women in Agriculture	13
Plenary Session	15
Key Recommendations	18
Technical Programme	21
List of Participants	25

Foreword



In India, agriculture is one of the oldest professions. For centuries, farmers have been silently innovating, testing, refining and adopting various agricultural practices to make them relevant, efficient and cost effective for improved livelihood security. In this context, farm women had also played a commendable role, especially for the conservation of germplasm, post harvest management and value addition of large number of field crops, vegetables and fruits. Most of the farm practices, developed by the farmers traditionally after considerable experience and suiting to the socio-economic needs of farmers have widely been adopted.

The innovations by farmers, have somehow not received the desired attention by the scientific community. Also their numerous successful stories have even not been noticed and documented. Therefore, many relevant technologies developed by the farmers could not be mainstreamed for large scale benefit to the farming community. In fact, our research planning, development and implementation process has invariably remained a “Top to Bottom” rather than “Bottom to Top”. Thus, the benefit of valuable traditional knowledge and wisdom could not fully be harnessed for improving agriculture sector in our country.

In recent past, ICAR has made some sincere efforts by launching a National Project to document Indigenous knowledge innovated by the farmers and published four useful volumes. Recently, the Trust for Advancement of Agricultural Sciences (TAAS), New Delhi also organized a workshop on “Farmer Led Innovations” which help in the assessment of specific needs for the validation of promising technologies developed by the farmers for the benefit of various stakeholders. By viewing the success of this workshop, it was considered important to organize a big national event by involving ICAR, CCSHAU, TAAS, PPV&FRA and NIF under the aegis of Haryana Kisan Ayog on the eve of Kisan Diwas (23rd December), which is celebrated on the birthday of a great farmer leader, and former Prime Minister of India, Late Ch. Charan Singh. This two days workshop on “Farmer Led Innovations” provided a neutral platform to the scientists, research managers, development officials, planners and progressive farmers from different parts of the country. The two days long deliberations were very fruitful and proved to be an eye opener to many scientists and science managers. It was strongly felt that we need to validate farmers’ led innovations and blend the available traditional knowledge with modern science and technology. This will enable us to ensure sustainable growth and development of agriculture sector.

Ayog is pleased that the Hon’ble Chief Minister of Haryana, Dr. Bhupinder Singh Hooda had announced the establishment of “State Agriculture Innovation Fund” to recognize and give incentives to innovative farmers. It is our expectation that the key recommendations emerging out from this workshop will receive priority attention for reorienting agricultural research agenda of organizations such as: ICAR, SAUs and other developmental agencies to reshape Indian agriculture in the country. We are sure that this publication on “Farmer Led Innovations” will be of immense benefit to the researchers, managers, scientists, farmers, planners and all other stakeholders engaged in making farming profitable, sustainable and a respectable profession in India.

(R. S. Paroda)

Abbreviations

CCSHAU	Chaudhary Charan Singh Haryana Agricultural University
DARE	Department of Agricultural Research and Education
DG	Director General
DDG	Deputy Director General
IPR	Intellectual Property Rights
TAAS	Trust for Advancement of Agricultural Sciences
PPV&FRA	Protection of Plant Varieties and Farmers' Rights Authority
NIF	National Innovation Foundation
HKA	Haryana Kisan Ayog
SAUs	State Agricultural Universities
LLRUVAS	Lala Lajpat Rai University of Animal and Veterinary Sciences
DSR	Direct Seeded Rice
NBPGR	National Bureau of Plant Genetic Resources
KVKs	Krishi Vigyan Kendras
NDRI	National Dairy Research Institute
CIMMYT	International Maize and Wheat Improvement Centre
CA	Conservation Agriculture
SRI	System of Rice Intensification
SHGs	Self Help Groups
NGOs	Non-Government Organizations
DAC	Department of Agriculture and Cooperation
ATMA	Agriculture Technology Management Agency
SDA	State Department of Agriculture
SDAH	State Department of Animal Husbandry
DAHD	Department of Animal Husbandry and Dairying

National Workshop on Farmer – Led Innovations

Introduction

Agriculture is one of the oldest professions practiced over 5000 years. In their pursuit for betterment, the Indian farmers consistently tried to make this occupation more efficient and cost effective which resulted in numerous innovations over the generations and helped in improving farming practices ensuring better livelihood options. Obviously, these innovations supported food security of the country. The farmers identified a number of new/indigenous traditional crops and developed varieties with enhanced productivity and better quality through selection. Farmers also developed low cost processing technologies for value addition, increased shelf-life and better marketability for various farm products. In addition, a number of farm implements and tools were designed and manufactured by the farmers to increase operational efficiency and productivity. In this context, commendable work has been done by women farmers, especially in the area of germplasm conservation, post-harvest management and value addition which helped in enhancing the farm income. Most of the farming practices traditionally adopted by the farmers are those which were evolved after long experiences of the farmers and communities under specific agro-climatic and socio-economic conditions. Therefore, such practices have been widely adopted and are sustained.

In fact, farmers are silently innovating, adopting the new practices and continuously improving them. These farmer-led innovations, over generations, have neither been duly recognized nor documented. Also the Intellectual Property Rights (IPR) on the innovations made by farmers have often been ignored. Value of traditional knowledge and its documentation has often remained unnoticed by scientists. As a result, many technologies developed by innovative farmers have not reached to other farmers.

Of late, the focus of the Government, planners and scientists has been on tapping the intellect of the farmers so that Indian farming become more sustainable, remunerative and globally competitive. In order to scale-up farmer- led innovations, which are valuable in many ways, it has become necessary to identify the potential farmers-led innovations, followed by their validation and refinement. It is felt that blending of traditional knowledge with modern science and technology is necessary to revamp agriculture and also to ensure sustainable growth and development in this sector. This has necessitated “bottom up” approach in which farmers’ participation in reorienting research and outreach programmes have to be ensured and recognized. The slogan “Science with Farmers FIRST” is the most appropriate indeed as it will give new stimulus to farmer participatory research and extension in achieving the future nutritional and food security goals.

In this endeavor, efforts have been made at various levels in the past by the “Trust for Advancement of Agricultural Sciences (TAAS)”, New Delhi, by organizing workshops on Farmer Led Innovations, in which scientists and research managers were participants and farmers as the resource persons. This initiative made scientists aware of the innovative capacities of the farmers and led to recommendation that more of such interactions be organized to encourage innovative farmers. This Workshop also helped in the assessment of

specific needs for large scale testing and adoption of promising technologies developed by the farmers for the benefit of various stakeholders.

Considering the emerging need to document and promote farmer-led innovations, it was decided jointly by ICAR, Haryana Kisan Ayog, CCS HAU, TAAS, PPV&FRA and NIF to organize a national workshop on “Farmer Led Innovations”. The workshop was organized on December 23-24, 2011 at CCS HAU, Hisar, to coincide with the Farmers’ Day, the 23rd December, 2011 and the birthday of Late Chaudhary Charan Singh, a farmer leader and former Prime Minister of India.

This two-day Workshop was planned with the following objectives:

- i) To identify farmer-led innovations which can be adopted for larger impact
- ii) To understand specific research needs for further verification, refinement and validation through blending of traditional knowledge with modern science
- iii) To assess the need for required policy interventions by which innovations could be scaled up for larger impact.

The participants of this workshop were innovative farmers (20) covering ICAR awardees from all over India, progressive farmers (58) from Haryana, Punjab, Uttar Pradesh, Rajasthan, senior research managers, scientists and technical staff (220) of ICAR, Haryana Kisan Ayog, Ministry of Agriculture, other academic institutions, SAUs, TAAS, PPV&FRA, NIF, NGOs, and Private Sector.

Inaugural Session

The two-days “**National Workshop on Farmer – Led Innovations**” was inaugurated by the Hon’ble Chief Minister of Haryana, Dr. Bhupinder Singh Hooda on the eve of “Kisan Diwas” on 23rd December, 2011,



the birthday of the great farmer leader and former Prime Minister of India, Late Ch. Charan Singh, at Indira Gandhi Auditorium, CCS HAU Hisar. The session was presided over by Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR. The other dignitaries on the dais included Padam Bhushan, Dr. R. S. Paroda, Chairman Haryana Kisan Ayog; Sh. Prahlad Singh Gilakhera, Chief Parliamentary Secretary, Vidhan Sabha, Haryana; Sh. Roshan Lal, Financial Commissioner & Principal Secretary Agriculture, Govt. of Haryana; Dr. P. L. Gautam, Chairperson, Protection

of Plant Varieties and Farmers’ Rights Authority; Dr. K. S. Khokhar, Vice Chancellor, CCS HAU; Dr Hardeep Kumar, Vice Chancellor, LLRUVAS; Dr. Anil Gupta, Vice Chairman, National Innovation Foundation; Dr. K. D. Kokate, DDG (Agril. Extn.) ICAR and Dr. N. N. Singh, Secretary, TAAS.

While inaugurating the workshop, the Hon’ble Chief Minister recalled the contribution of farmer leader and former Prime Minister of India, late Sh. Chaudhary Charan Singh. He narrated that he was a great visionary

and always struggled for the cause of farmers and rural communities. In his life time, he always emphasized upon the planners to make agriculture a profitable and competitive venture. He appreciated the initiatives taken by the organizers and participants in organizing this important workshop on Farmer-Led Innovations and urged that such programmes should be organized more frequently, as such efforts will help in encouraging farmers and scientists to work together for achieving sustainable development of agriculture in the country.

On this occasion, Hon'ble Chief Minister released a booklet in Hindi containing details of various farmer friendly schemes, being implemented in Haryana and a Working Group Report on "Conservation Agriculture for Sustainable Crop Production in Haryana", brought out by the Haryana Kisan Ayog. A souvenir brought out by CCS HAU and two publications of ICAR were also released. Fifteen farmers identified from different States by the National Innovation



Foundation for their important achievements were also honored by the Hon'ble Chief Minister, Haryana.

The Chief Minister commended the remarkable work done in such a short time by the Haryana Kisan Ayog under the able leadership of Dr R. S. Paroda and announced setting up of a "Haryana Agriculture Innovation Fund" to be operated by the Haryana Kisan Ayog. He further announced that a sum of rupees two crores will be provided for this purpose in the current financial year and subsequently rupees one crore will be provided annually, through the Haryana State

Agriculture Marketing Board. His announcement was applauded by the farmers and all the other participants. The Chief Minister desired that fund so created should be utilized with the following broad objectives:

- (i) To help in building an innovative and creative society in the state.
- (ii) To strive to make Haryana a national leader in sustainable agricultural technologies by scouting, spawning and sustaining traditional knowledge and grassroot innovations in agriculture.
- (iii) To facilitate evolution and diffusion of grassroot indigenous knowledge and innovations in agriculture, so as to meet the socio-economic and environmental needs of the society .
- (iv) To help in the transition of grassroot innovations and knowledge into self-supporting activities.
- (v) To build linkages/bridges between excellence in formal scientific systems and informal knowledge systems to create a knowledge network to link various stakeholders through application of information technology and other modern means.

- (vi) To document innovative technologies and indigenous knowledge for their long term benefits to the society
- (vii) To further refine and out-scale innovations for their greater impact and utilization for sustainable progress of agriculture in the State.



Dr. S. Ayyappan, DG, ICAR & Secretary DARE, in his presidential address appreciated the initiatives taken by the Hon'ble Chief Minister, Haryana, for establishment of Haryana Kisan Ayog. This initiative will go a long way in reorienting planning with regard to revamping agriculture in the state. The efforts being made by the Haryana Kisan Ayog in collaboration with CCS Haryana Agricultural University and line departments of State Govt. were appreciated by Dr. Ayyappan. He opined that the involvement of innovative farmers in our research and development pursuits has become necessary for

their mature and innovative ideas about the basic needs of the farmers to make agriculture and allied occupations cost-efficient and sustainable. Therefore, their skills must be identified and utilized for betterment of agriculture.



Padam Bhushan Dr R. S. Paroda, Chairman, Haryana Kisan Ayog, apprised the Hon'ble Chief Minister, Haryana and the participants about the initiatives taken and the recommendations made by the Ayog. He expressed that the Ayog works on the "Farmers First" slogan, and has accordingly prepared working group reports on various problems of the farmers. Several recommendations have been made for the betterment of farmers and rural economy since the establishment of Ayog. The important recommendations made by the Ayog, include Farmer Participatory Research; Capacity

Building of the farmers for sustainable agriculture; Entrepreneurship Development, etc. Dr. Paroda thanked the Hon'ble Chief Minister, Haryana for his all out support to the Haryana Kisan Ayog.

Dr. K. S. Khokhar, Vice Chancellor, CCSHAU, while welcoming the Chief Guest Hon'ble Chief Minister, Haryana gave a brief review of the efforts being made by the Agricultural University to associate farmers in its various programmes. These include vocational trainings, different types of Kisan



Melas/farm Darshan, Field Days, Gyan Diwas, FLDs and OFTs. A Toll Free Help line (1800-180-3001) is also run by CCSHAU, Hisar to help the farmers and other stakeholders.

He also thanked the Hon'ble Chief Minister, Haryana for his initiative to establish Haryana Kisan Ayog at CCS HAU Campus as it is helpful in identifying the problems of the farmers and re-orienting research and outreach programmes of the University accordingly. He said that the organization of this workshop will help in encouraging other farmers to come forward with their creativity.

Dr. K. D. Kokate, DDG (Agril. Extn.) ICAR emphasized the need of making extension system need based, more effective and farmers friendly.

At this occasion, Sh. Roshan Lal, Financial Commissioner & Principal Secretary Agriculture, Government of Haryana said that the ultimate aim of various efforts being made by all of us is to enhance the productivity and profitability of agriculture in Haryana and therefore, government will support such initiatives as and when required.



Dr. P.L. Gautam, Chairperson, PPV&FRA, highlighted the different provisions of PPV&FR Act. He mentioned about the Plant Genome Savior Awards for recognizing the services of farmers / communities in conservation of agro-biodiversity. He informed that the Authority is working closely with different stake holders including Universities, NGOs, Private Sector, etc. Thanking the Chief Guest for establishing the Haryana Agriculture Innovation Fund, he indicated that the Authority will join the efforts of the Ayog in organizing events for awareness generation and felicitation of the innovator farmers.

Dr. Anil Gupta highlighted the activities of NIF and congratulated the Chief Minister for his announcement to establish Haryana Agriculture Innovation Fund. He assured all help and support for realization of the objectives of the State level innovative fund for the benefit of farming community. He narrated the examples of some successful innovators and hoped that protection and large scale adoption of such innovations will go a long way in socio-economic transformation of Rural India.

Dr. Hardeep Kumar, IAS & Vice Chancellor, LLRUVAS, Hisar apprised the Chief Minister about the progress and efforts of the newly established University of Veterinary Science and Animal Husbandry in improving the animal health and productivity of the livestock sector in Haryana and requested for more allocation of funds by the State Govt. and ICAR to further strengthen the animal husbandry and dairying sector in the State.

Inauguration of Exhibition

On this occasion, an exhibition was also organized on December 23, 2011 at the Indira Gandhi Auditorium, Chaudhary Charan Singh Haryana Agricultural University, Hisar. In this event innovative farmers, Protection of Plant Variety and Farmers' Rights Authority (PPV & FRA), Business Planning and Development Unit of CCSHAU and Haryana Kisan Ayog participated. It was inaugurated by Dr. S. Ayyappan, DG (ICAR) and



Secretary, DARE, Padam Bhushan Dr. R. S. Paroda, Chairman, Haryana Kisan Ayog and Dr. K. D. Kokate, DDG, (Agril. Extn.), ICAR; Dr. P. L. Gautam, Chairperson, PPV & FR Authority; Dr. K. S. Khokhar, Vice Chancellor, CCS HAU; Dr. Hardeep Kumar, IAS & Vice Chancellor, LLRUVAS, Hisar; Dr. Anil Gupta, Vice Chairman NIF and other dignitaries, scientists and farmers graced the occasion. The innovations included small modern machines, varieties of pickles, jams, jellies, baby corn, mushroom, basmati rice, fruits, vegetables, flowers, etc. The depiction of these

innovations of the farmers through excellent exhibits attracted the attention of planners, science managers, scientists, entrepreneurs, farmers and other participants of the Workshop.

Out of several exhibits demonstrated by the innovative farmers from different states, the stalls of **Krishna Pickles** comprising 84 varieties of pickles with beautiful packaging attracted the attention of the visitors. Being an illiterate couple from Uttar Pradesh with small holding of land, they started making pickle just 1.5 kg/day. Currently, they are having one factory for pickle preparation and four retail shops in Gurgaon, Ghaziabad, Faridabad and Delhi with a turnover of more than one crore per annum.



Sh. S. Muthuswami from Tamil Nadu has developed and demonstrated hand operated milking machine costing just Rs. 4500/-. It takes 6-8 minutes of time to milk an animal. It is suitable for small dairy farmers having 2-3 milch animals. He has already sold over 100 such milking machines to the farmers.

Sh. Kanwal Singh Chauhan from Sonapat, Haryana demonstrated innovative technologies for the



production of quality baby corn and mushroom in Haryana. Several other farmers have been benefitted by this crop diversification in the State and the country.

The Business Planning and Development Unit, CCSHAU, Hisar also demonstrated commercializable technologies developed by the university and became a point of attraction for farmers as well. The PPV & FRA made available copies of various registration forms and related literature for plant variety protection and farmers' rights to all stake-holders. Haryana Kisan Ayog provided literature with regard to the activities being taken up by the Ayog.

Technical Sessions

Five technical sessions were conducted in this Workshop. Proceedings of these sessions and the recommendations emerging out of the various presentations and discussions are given in the following sections.

Technical Session I: Crop Improvement

Co-chairs	Dr. S. Ayyappan Sh. Roshan Lal, IAS
Panelists	Dr. B. S. Dhillon Sh. Harpal Singh
Rapporteurs	Dr. A. M. Narula Dr. R. B. Srivastava

In this session seven farmers made presentations and gave their views as under:

Sh. Bhagwan Dass from Young Farmers' Association, Punjab, felt the need of capacity building of small and marginal farmers and suggested that block and village level agricultural officers should have more interaction with the target groups. He was of the view that KVKs should also increase their outreach programmes. He remarked that marketing of variety of high value and low volume agricultural products produced through diversification of agriculture was different and therefore, government should develop a strategy to support farmers in marketing of their produce at profitable MSP.

Sh. Virender Singh, young farmer from Haryana, was of the opinion that intercropping of onion/wheat/mustard/muskmelon in sugarcane based cropping system could provide high returns to farmers. He has been following this system for the last 4-5 years on his farm. He narrated that the direct seeded rice (DSR) technology saved 15 to 20 % of irrigation water and also helped in reducing labour cost for rice cultivation. However, the technologies related to control of Makara grass and other weeds in this system need further research to help DSR farmers.

Sh. Sudhir Chadha from Nainital Distt, Uttarakhand, apprised the participants about horticultural technologies developed by him under Indo- Dutch Project. Intercropping of papaya with shade loving crops viz. pumpkin, turmeric, ginger, gladiolus etc. was useful in increasing the farm income. He also listed the benefits of protected cultivation. In view of emerging markets of organic produce in metro-cities, the knowledge of farmers must be upscaled on this aspect of crop production including simplified procedure for certification and

marketing of organic produce. He emphasized the need for supply of quality planting material of vegetables and fruits to the needy farmers at cheaper rates at their door step by SAUs/ICAR institutes of the country.

Sh. Sunda Ram from Rajasthan, a national awardee and known for the development of low input technologies, suggested that farmers must avoid mono-culture. They must include fruit crops, vegetables and pulses in their cropping system for food and nutritional security and also to maintain the good soil health. He explained about cost effective water saving devices for tree plantation and termite control (by putting the pieces of Eucalyptus woods between cropped rows) in dry land areas which can be validated and promoted by the KVKs. He also suggested the farmers to come forward for registration of germplasm and farmers varieties with NBPGR, New Delhi and PPV & FR Authority, respectively. He has registered several local varieties as germplasm with the NBPGR, New Delhi.

Sh. P. Narayanan Unny from Kerala made presentation on “Navara” cultivation which is a non-traditional rice and has enormous medicinal value. He was of the opinion that the farmers can earn more profits by cultivation of non-traditional crops if the government upscales their capacities in terms of infra-structure development, processing, training and marketing. In his opinion, high value products can be developed from most non-traditional indigenous food crops.

Sh. Sudhir Agarwal from Mathura U. P. suggested the farmers to adopt seed business to increase their income. However, he felt the need for supply of quality seeds of new varieties/ hybrids in the shortest possible time and training for their further multiplication by the NGO’s or SHGs to help the farmers. According to him, the well managed piggery, goatery and dairy farming also generate higher farm employment and net returns per unit investment. However, there is a need to provide sexed semen and pedigree bulls of different types of livestock at cheaper rates at doorsteps to help farmers rearing various types of such animals. He was of the opinion that more such events of farmer-scientist interactions should be organized in future also in other states.

Maj. Manmohan from Amritsar, Punjab appealed the farming community to adopt diversification in agriculture. He emphasized the importance of drip irrigation, vermi-culture and intercropping of a variety of high value low volume crops in orchards. He emphasized the need that farmers should have units of vermi-composting and water harvesting devices on their own farms for sustaining good soil health and higher returns from diversified agriculture.

Remarks by the Panelists

Dr. B. S. Dhillon, Vice Chancellor, Punjab Agriculture University, Ludhiana, advised the scientists to initiate research on non-traditional crops in view of their importance in present day context. Innovative farmers could be used as resource persons for technology transfer and should be given opportunity to interact with scientists.

Mr. Harpal Singh, a farmer from Kurukshetra, while participating in the discussion as a panelist, emphasized the need for large scale frontline demonstrations of the latest technologies, through KVKs, for creating awareness among the stakeholders. He requested the authorities to provide incentives to innovative farmers and frame suitable policies and create proper infra structure facilities for validation of their technologies.

Remarks of Co-chairs

In his concluding remarks, the Chairman Dr. S. Ayyappan congratulated all the speakers for sharing their vast experiences in crop improvement and crop diversification. He remarked that it was highly encouraging, especially to listen to the views and experiences of the farmers and emphasized the need to organize such interactive sessions frequently on regular basis in different parts of the country. He suggested that other states should also come forward to organize such types of seminars/workshops. On this occasion, he offered the “Visiting Professorship” to Sh. Sunda Ram and position of “Senior Scientist” to Sh. Virender Singh at any ICAR Institute of their choice for six months duration. ICAR will initiate a scheme in this regard, not only to encourage the innovative farmers, but also to utilize their wisdom and experiences for framing the policies related to orientation of current research and extension activities for the development of agriculture in the country.

Sh.Roshan Lal, IAS emphasized the need for establishing innovative funds in different states for the farmers to support their initiatives as has been announced by the Hon’ble Chief Minister of Haryana for the State. He further suggested for the development of technology validation facilities for farmer innovations by the Department of Agriculture and SAUs. He was of the view that Conservation Agriculture (CA) based technology including DSR are showing encouraging results in Haryana. However, he suggested to the scientists to generate sufficient data on DSR technology including control of Makara grass and other weeds and pests in this system to make it more farmers’ friendly.

Technical session II: Livestock, Poultry and Fisheries

Co-chairs	Dr. Hardeep Kumar, IAS Dr. M. P. Yadav
Panelists	Dr. A. K. Srivastava Dr. R. K. Sethi
Rapporteurs	Dr. S. M. Chahal Dr. A. K. Pruthi

In this session five farmers made presentations and gave their views as under:

Sh. B. Mohan, a progressive farmer from Tamil Nadu described the livestock/poultry/fisheries based mixed farming system approach under 90% rainfed area in Tamil Nadu. He suggested that fodder production, balanced feeding, farm mechanization, timely prevention and control of diseases, value addition and adopting proper marketing strategy are key factors for the success of livestock based mixed farming system.

Sh. Baljit Singh Redhu, a progressive dairy and poultry farmer from Haryana emphasized that with the adoption of scientific farming techniques, poultry and dairy farming are quite profitable for farmers of the State. He stated that the State Government has launched a number of new schemes for the benefit of livestock farmers. He further added that the cross breeding by making use of imported quality semen of proven bulls in cattle, balanced feeding, efficient management and adoption of improved management practices are essential for maximization of farm returns.

Sh. Sultan Singh, a progressive fresh water fish farmer from Haryana emphasized that fresh water fish farming opens an economically viable farming system in the state for rural self-employment. He opined that value added product development and marketing will be helpful in increasing economic returns. He suggested that proper feed and winter stress management and making use of floating feed makes it feasible to harvest up to 9 ton/ha of fish.

He further emphasized that proper infrastructure for better management of low temperature stress in cold winter is highly lacking with fish farmers of Haryana which inhibit the farmers from taking a good fish harvest during winter months. Credit and other facilities such as water and electric charges on par with agriculture should also be extended to the fish farmers of the Haryana State.

Sh Dev Narain Patel, a renowned honey bee farmer from Uttar Pradesh, having 180 boxes and producing about 400 qt. of unprocessed honey annually suggested that by adopting proper crop rotations matching with the availability of flowers will help to harvest maximum honey per colony and by adopting primary processing of honey and proper marketing strategy will ensure handsome returns to honey bee farmers.

Sh. Umesh Sood, an animal welfare volunteer from Himachal Pradesh, created an institution for rearing milk producing and non-producing stray cattle. According to him the cow rearing is not only profitable for milk production but also to get other byproducts, viz biogas, vermi-compost, “PANCHGAVYA”, Amrat Pani, alternative pest control formulations and other products which can be prepared from cow dung/urine and sold in the market for better economic returns from organic farming.

Remarks By the Panelists

After listening to the farmers, the panelists expressed their views as under:

Dr. A. K. Srivastava, Director, NDRI Karnal emphasized that livestock sector in Haryana was contributing about 30% of State Agricultural GDP and food security. Murrah buffalo is the most preferred dairy animal due to its better feed conversion and nutrient utilization efficiency. Milk quality was much superior in respect of fat, sugars and protein content in comparison to cow milk.

He further underlined the important points in buffalo rearing such as appropriate estrus diagnosis, balanced nutrition as per requirements of the animals, mastitis management in high yielders, quality feed and fodder availability, FMD vaccination twice a year and timely prevention of other diseases was required for enhanced milk production and income of the dairy farmers.

Remarks of Co-chairs

In his concluding remarks, Dr. Hardeep Kumar, IAS & Vice Chancellor LLRUVAS appreciated the achievements and risk bearing ability of the dairy farmers. He emphasized that the livestock sector needed to be given due attention by the policy planners for attaining required national growth targets for agricultural sector. He elaborated that in near future, Electronic chip identification system for superior Murrah buffaloes will be introduced in Haryana. He advocated that the progressive farmers should encourage other farmers in their close vicinity to adopt improved feed management and other technologies for increasing livestock production and productivity in order to increase their household income.

Dr. M.P. Yadav, Consultant, HKA emphasized the need of augmenting green fodder production, making available quality fodder seeds to the farmers, providing subsidy on area specific mineral mixture and giving remunerative price of milk to the farmers for dairy development in Haryana.

Technical Session III: Integrated Crop Management

Co-chairs	Dr. P.L. Gautam
	Dr. A.M. Narula
Panelists	Dr. V.P. Singh
	Sh. Balbir Singh
Rapporteurs	Dr. J. P. Singh
	Dr. A. S. Dhindwal

In this session, seven farmers made their presentations and expressed their views as under:

Sh. Kanwal Singh Chauhan, a farmer from village Aterna Distt. Sonapat, narrated his experiences on the introduction of basmati rice in 1980, mini dairy in 1984 and bio-gas in 1987. In 1987, he came in contact with KVK, Sonapat and started growing baby corn, exotic vegetables, preparing vermi-compost, bee keeping, mushroom production, sweet corn and hybrid seed production of baby corn and paddy. He revealed his success story of baby corn. Sh. Chauhan established his own processing unit for baby corn at his farm which fetched him a good income. He informed the audience that about Rs 70 thousand to 1 lac income from one acre of baby corn, and from Rs 50-70 thousand/acre from sweet corn could be achieved. The leftover stalks of baby corn were fed to animals as green fodder which improved their health and milk production. He had established integrated unit of mushroom cultivation under NHM alongwith a unit of honey bee production. Shri Chauhan has also set up a Bio-Tech Unit of Bio-fertilizers. He has started a farmer school, and trainees from Bihar and farmers from Nepal took training at his school. Dignitaries from India and farmers from Afghanistan and Germany have visited his farm and were highly impressed by his multi-enterprise innovative agricultural technology.

Sh. Vikas Kumar Chaudhary, a farmer from Taraori, Distt. Karnal of Haryana, has formed a society on “Conservation of Natural Resources and Empowering Rural Youth”. He has been adopting zero-tillage technology for the last 10 years and had started sowing wheat by using Turbo Seeder since 2010-11. This technology avoids burning of paddy straw, allows fewer weeds to grow and saves energy. He further informed that the direct seeding of rice saved about 15-20 per cent of irrigation water. He also pin-pointed that relay mung in rice-wheat cropping system was successful and about 2.5 quintals of mung per acre could be harvested with this technology. He suggested that to meet early requirements of fodder, berseem could be grown with dual purpose wheat in the last week of October and its first cut could be taken after 55 days of sowing. This practice gave him an additional income of Rs. 5000/- per acre. He further informed that 25 field days had been organized at his farm and one Ph.D. student from CCSHAU, Hisar was also working in collaboration with CIMMYT on the effect of DSR and transplanted rice on methane gas emission. He highlighted the importance of flow of information and underlined that their society was being helped by KVK of CCSHAU, Hisar and CIMMYT scientists to popularize CA based technologies at his farm.

Sh. Ramesh Dagar, a farmer from district Sonapat, Haryana highlighted the importance of marketing of multi-enterprise based farm produce. He demonstrated that integrated farming system comprising dairy, mushroom, bio-gas, vermi-composting, fish farming, nursery raising and beekeeping for small farmers having 2.5 acres of land was employment generating and profitable. He claimed that a net income of Rs 10-12 lacs from one hectare holding could be achieved by adopting multi-enterprise based integrated farming system approach.

Sh. Amarjeet Singh Dhillon, a farmer from village Bargani, Punjab, explained the importance of crop diversification. His crop diversification practice included growing fruits (guava, kinnow, grapes) and vegetables (capsicum, bottle gourd) and cotton. He demonstrated the benefits of year round assured income model from Agro-horticulture system.

Sh. Gurcharan Singh, a farmer from village Brass, Distt. Karnal, Haryana narrated about his experience with quality seed production of paddy, wheat, gram, peas and berseem. By multiplication of the quality seeds of these crops, he is earning 1.5 to 2 times more income over the conventional crop production.

Sh. Gudiwada N. Naidu, a farmer from Andhra Pradesh, described his experience with sustainable agriculture through crop diversification and organic farming. He has been growing field crops, vegetables and fruits organically for the last 24 years. He further narrated about the technology of system of rice intensification (SRI) in which 15.0 tons per ha yield from first crop and 10 tons from ratoon rice crop was obtained. He also informed that drum seeding method of rice sowing was highly water saving and economical practice. To control weeds under SRI, Cono-weeder was used successfully. In his opinion, the technology of Cono-weeder should be further improved and mechanized to help small farm holders using SRI based technology.

Sh. Atam Swaroop, a farmer from village Mahok, Himachal Pradesh, revealed his experiences about cultivation of flowers as a fortune changers on his 2.5 ha land. He is growing various types of flowers throughout the year in poly-houses. He informed that an income of Rs 1.5-8.5 lacs per acre was achieved by growing various types of flowers. He was facing the problem of availability of good quality planting material/seeds of various flowers and requested the SAUs and ICAR Institutes to help the farmers in this regard.

Remarks by the Panelists

After listening to the experiences of the farmers, the panelists expressed their views as under:

Dr. V.P. Singh Ex-Director Research, CCS HAU remarked that there was no alternative to holistic approach of integrated crop management to attain higher income from agriculture. He also suggested establishment of agro-based units of integrated farming system alongwith processing and marketing intelligence cell at the SAUs to help farmers.

Sh. Balbir Singh, farmer from village Shyadwa, Distt. Hisar, Haryana mentioned that a straw-berry grower can earn an income of Rs.5-6 lacs per year. However, there was the problem of getting quality planting material and marketing of their produce. He suggested that a processing unit for straw-berry be established at the production site around Hisar to help the straw-berry farmers in the State.

Remarks of the Co-chairs

Dr. P.L. Gautam, remarked that the farmers have reported that they face problems in getting loans and

hence, the process needed simplification. He pointed out that there was need to encourage establishment of small cooperative societies or self help groups at village level for collecting, grading and marketing of produce. Based on the success story of Sh. K.S. Chauhan and Sh. Ramesh Dagar, he opined that diversified farming was a hope for future generations. He highlighted the need for suitable arrangements for timely availability of quality seeds and planting material by the SAUs and Horticulture Departments to help and benefit the farmers.

Dr. A.M. Narula, suggested that the farms of progressive farmers be listed and recognized as Centres of Excellence for master training and demonstration by the SAUs and ICAR.

Technical Session IV: Women in Agriculture

Co-chairs	Dr. K. D. Kokate Dr. B. S. Duggal
Panelists	Dr. Krishna Srinath Dr. Indu Sharma Mrs. Binder Pal Kaur
Rapporteurs	Dr. Saroj S. Jeet Singh Dr. Nishi Sethi

In this session five farm women made their presentations which were mainly based on their success stories who expressed their views as under:

Mrs. Krishna Yadav, a resident from U.P., was earlier working in a farm house in Najafgarh, Delhi as a laborer. Thereafter, she started growing vegetables on leased land and was selling them with the help of her husband on road side. Both she and her husband were illiterate but after participating in the trainings on preservation of fruits and vegetables organized by KVK, IARI, Delhi, she started preparing a variety of pickles, murabbas and chutneys on a small scale. Slowly, she opened her own shop in Delhi. Currently, she is an owner of a factory and 4 shops in the NCR and preparing 84 types of different products and earning good returns from pickle industry. She is marketing her product branded as “Krishna Pickles” in Delhi, Gurgaon, Ghaziabad, Noida and other cities in NCR region. She gave the message to other farmers that with sincerity, determination and hard work nothing is impossible, if you have a strong will and focused target.

Mrs. Neelam Tyagi, a resident from U.P. and Secretary, Laxmi Jan Kalyan Sewa Sansthan, has been working in the areas of rural health, agriculture and education since 1999. She is working on a variety of agro-based enterprises including agriculture, gardening, fishery, dairy, livestock and also interacting with KVKs. She has taken lead by forming 300 Farmers’ Clubs and 200 SHGs and encouraged them to follow community farming and joint cooperative marketing. She has taken lead in educating women farmers and encouraging them to go for soil testing for optimization of fertilizer use in agriculture. Her sincere efforts towards community based agriculture have contributed a lot in augmenting the net income of farmers. This concept of community farming and marketing was lauded by Dr. Kokate and other participants.

Mrs. Sudesh Malik, a resident of Nidana village of Jind district (Haryana), has acted as a leader to

initiate “Women Agriculture School” in her village. Through this school, she inculcated knowledge regarding insects and pests of various crops and taught farm women about their identification as beneficial and harmful categories, including their predators for better pest management in different crops. She also prepared teaching aids covering these aspects. The farmers have been benefited by avoiding excessive use of pesticides and sprays at their farms. The women SHG further extended this knowledge among school children. She suggested that in Govt. plans, special training programmes for farm women on all the aspects ranging from sowing to farm management should be included. Women can learn everything if taught with full sincerity. The Chairman pointed out that Mrs. Malik had created an example of teaching skills in a simplified form even for a complex subject like Entomology.

Mrs. Sulochana Nehra a resident of Sunderheti village of Jhajjar district in Haryana has 28 acres of land. She has been pursuing integrated farming including flower production, dairy, silage making and biogas production since last five years.

She got constructed a community water tank for rain water harvesting with the help of other farm women to store 55 lakh litres of water and using it, by drip irrigation, for irrigating different crops. She also requested the Chairman, Dr. Kokate to provide financial support and training in processing and marketing of their produce in the market.

Last speaker was Mrs. **Geeta Rana** from Sirsa, Haryana. She was hesitant in making her presentation before large gathering. On her behalf, Dr. R. S. Sheokand from KVK, Sirsa apprised the house of her achievements. She was living in poverty but now she is owner of 4 buffaloes and is earning Rs 2.50 lakh annually and has set an example for other illiterate and poor women.

The Chairman, Dr. Kokate also allowed other farmers, namely Sh. M.N.P. Shivakumaran Mahaswami, Sh. Srinivas Rao, Sh. Ramesh Chauhan, Sh. Hukum Singh, Sh. Satyawan Dagar and Sh. Raj Tyagi to share their views on their innovations. Sh. Srinivas Rao, gave an example of enhancement of fertility of soil by incorporating poultry manure. He also shared his modified technologies which he has developed for pesticide spray. Sh. Daljeet of Tokas, Hisar, came in contact with KVK staff in 2006-07 and selected and multiplied seedless quality lemon. He is getting 2.5-3.0 quintal lemons from 25 plants. Everyone was impressed to see the bunch of 25 lemons on a twig brought by the farmer. Sh. Hukum Singh suggested that rates of improved seeds should be fixed in consultation with farmers as prices of inputs are increasing very fast. Sh. Ramesh Chauhan told the house that he had grown a cauliflower weighing 12 Kg and 6 ft long bottle gourd by using organic manure only.

Mrs. Indira Bishnoi, Ex- member of Board of Management, CCS HAU expressed her views on the contribution of women in agriculture and requested authorities to arrange tours for farm women to different research centers and farms of innovative farmers. She also requested scientists to develop gender specific farm implements and machinery. In reply to her concern, Dr. Sudesh Gandhi, through power point, presented some women friendly technologies which were generated by the Department of Family Resource Management, IC College of Home Science, CCSHAU, Hisar.

Remarks by the Panelists

After hearing the views of farm women, the panelists expressed their views as below:

Dr. Indu Sharma commented that, though, women participation in agriculture was very evident but they had not been given decision making power. Women have always to fight for their rights. She also emphasized the need to generate more and more women friendly equipments and technologies. She said that it was high time now when efforts are needed to change the mindset of people towards women. Therefore, it was the prime duty of mothers to develop leadership qualities among girls while bringing them up.

Mrs. Binder Pal Kaur from Punjab gave an example of her success story on Bee Keeping which she was pursuing under the guidance of KVK. She had extended her work and now besides fifteen members of her family, other poor and needy women were also working with her. She suggested to the delegates to present honey to their friends and relatives instead of sweets as it was healthy and nutritious than sweets.

Dr. Krishna Srinath gave a brief presentation on drudgery reducing technologies developed specifically for farm women. She emphasized the need to empower women. She recommended that for sustainable agriculture, it was important to do gender mainstreaming through public-private partnership.

Remarks of Co-chairs

In his concluding remarks, Dr. B.S Duggal congratulated all the speakers for sharing their experiences in agriculture and the organizers for taking initiative in organizing this kind of workshop for the first time. He remarked that it was highly encouraging especially to listen to the views of the farm women and emphasized to organize such interactions regularly. He suggested that other States should also come forward to organize such programmes. Dr. K.D. Kokate concluded the session with his remarks that these women had made appreciable efforts in developing innovative technologies in agriculture and agro-based industries, besides their household duties.

Plenary Session

Co-chairs

Padam Bhushan Dr. R.S. Paroda

Dr. K.S. Khokhar

Rapporteurs

Dr. R. K. Kashyap

Dr. R.S. Paroda, while initiating discussion, lauded Hon'ble Chief Minister, Haryana, Dr. Bhupinder Singh Hooda for the creation of Haryana Agriculture Innovation Fund and assigning the task for the operation of this fund to the Haryana Kisan Ayog. He said that this initiative will encourage farmers to become more creative and have long lasting impact on revamping agriculture in the state. This fund will help innovative farmers in various ways, particularly in getting their technologies refined and validated and put them in use by larger section of the stakeholders. He informed the audience that the book on the "Farmers Innovators" has been translated into Hindi by the DDG, (Agril. Extn.) Education, ICAR, New Delhi. He said that the contribution of women in agriculture and allied fields are being brought forward and described it as just a beginning and hoped that this would continue in future.

He then invited the rapporteurs of the four sessions i.e. Crop Improvement; Livestock, Poultry & Fisheries; Integrated Crop Management and Women in Agriculture to present their recommendations. Important recommendations emerged out from this workshop are presented at the end of this section.

Concluding Remarks

After the presentation of the recommendations of various technical sessions, Dr. Paroda requested Dr. K.D. Kokate, DDG (Agril. Extn.), ICAR, Dr. P.L. Gautam, Chairperson, PPV&FR Authority, Govt. of India, and Dr K. S. Khokhar, Vice Chancellor, CCSHAU & Co-Chair of the session to offer their concluding remarks.

Dr. K.D. Kokate congratulated the organizers for holding very successful two-day Workshop on Farmer-Led Innovations. He said that good presentations and very fruitful discussions were held in various sessions and the objectives of the workshop had been successfully achieved. He lauded the excellent presentations of the farmers and for depicting varieties of exhibits brought by them from distant places of the country. It was an eye opener for the policy planners and scientists and sensitized them to reorient their thinking and research programmes to come upto the expectations of the farmers. A total of nine panelists, 24 innovators and 10 farmers in the plenary session put forth their ideas which were not only actionable but also implementable. Dr. Kokate emphasized that the KVKs could be used for more visible and vibrant support centres to the farmers and hoped that a committee constituted under the chairmanship of Dr. Paroda would suggest effective ways to cater to “Registration” and Refinement of the farmer-led innovations”. He said that Haryana should take a lead in networking of the farm innovators district-wise where farmers should be identified in the thematic areas viz., rice-wheat and other farming systems/ mushroom/ honey/ organic products/ seed treatments/ bio-pesticides/ bio-fertilizers/ natural resource management/ fisheries/ dairy/ poultry etc. Activities of NICRA village in Andhra Pradesh were highlighted and it was emphasized that ways and means should be worked out to link them with other villages of the district. Feedback from the innovative farmers should be a continuous process and modalities should be worked out for their capacity building as “Certified Crop Advisors”. Dr. Kokate concluded by emphasizing the need of transmitting the experiences of participating farmers to others for making farming profitable and sustainable so as to ensure food security.

Dr. P.L. Gautam, complimented all the speakers for sharing their experiences and underscored that farmer-led innovations and protection of their rights are being recognized widely. Hence, he emphasized that a policy should be in place for protection of intellectual property rights of such Farmer- led innovations. He informed that to protect small innovations: government is contemplating to bring a legislative mechanism. National Innovation Foundation (NIF) has already made a beginning in this direction with registration and verification of even, small innovations and is honoring such innovators. Dr. Gautam also mentioned about the “Honey bee networking” of the NIF and was of the view that others should become members of this network. Dr. Gautam underscored the need to protect the varieties of farmers and documentation of bioresources and their associated traditional knowledge. The PPV&FR Authority will provide the needed guidance in this endeavor. He informed that FAO has initiated the establishment of “Globally Agricultural Important Heritage Sites” and first such site has been identified in Odisha. The practices of crop cultivation at this site should be protected as people from across the globe shall be interested to benefit from such examples. Dr. Gautam also advocated the development of “Centre of Excellence” at the innovative farmers’ fields and suggested that other farmers should

visit and benefit from such centres. Dr. Gautam appreciated the efforts of the Chairman, Haryana Kisan Ayog and the Vice-Chancellor, CCSHAU for timely holding this Workshop at Hisar, Haryana.

Dr. K. S. Khokhar raised two important issues; (i) Innovations and their validation and (ii) Success stories which could be directly adopted by other farmers. He gave the example of Mr. Chauhan of Aterna village (Sonapat) for raising the baby corn and sweet corn and also of Mrs. Krishna Yadav for making pickle industry a success after taking training from KVKs. Dr. Khokhar emphasized that the farmers should also make their own Committees/SHGs for networking and offered to provide them infrastructural facilities without any charge at CCSHAU, Hisar. He also lauded Haryana Farmer Innovations Fund announced by the Hon'ble Chief Minister of Haryana, Dr. Bhupinder Singh Hooda. He described Dr. Paroda as the biggest innovator in the modern agriculture of India. Dr. Khokhar also emphasized that the Visiting Professorship to farmers be implemented in all the SAUs and announced that CCS HAU would soon start trainings for entrepreneurs and also vocational trainings for others. He thanked the participating farmers, Haryana Kisan Ayog, ICAR, PPV&FR Authority and NIF for making this Workshop a success.

Dr. R.S. Paroda, Chairman, Haryana Kisan Ayog, in his concluding remarks, said that all over the world, emphasis is being given to the agricultural research pertaining to the farming system vis-à-vis small land holdings and how these could be linked with the market. Dr. Paroda emphasized that the research agenda should be revised involving farmers in the process. Farmers should not be at the receiving end and the deliberations of the workshop had clearly outlined that the farmers could give directions for future research. He said that knowledge was power and the purpose of this workshop was not that scientists should give new ideas to the farmers but vice-versa. Farmers must also learn from their fellow farmers. Scientists should also understand the innovative ideas of the farmers. He said that basic purpose of KVKs, SAUs and the Haryana Kisan Ayog is to develop policies and guidelines which would benefit the farmers and for this purpose all the three components should repose confidence in one another. The innovative farmers should be identified and given suitable designations so that they can interact with the policy makers for framing the policy for them. He particularly mentioned the name of Sh. Sultan Singh in Fisheries, Sh. Kanwal Singh Chauhan for baby corn production and Sh. Redhu in Animal Husbandry and Dairy for the purpose. Dr. Paroda also highlighted that the vocational trainings in agriculture should be started not only for the graduates but also for the school drop-outs. He emphasized that self-help is the best help and there have been many examples in this workshop. He said that a good beginning has been made at CCSHAU and such workshops would be held in each and every division/district of Haryana. A separate workshop of this kind should also be held for women only. He also emphasized the need to strengthen the Kisan Clubs so that knowledge can be disseminated through these Clubs which could be linked with the market. He congratulated Dr. K.S. Khokhar, Vice-Chancellor, CCS HAU for commendable help for holding this National Workshop and



also lauded the contributions of Dr. S. Ayyappan, Director General, ICAR, Dr. Kokate, DDG (Agril. Extn.) ICAR, Dr. P.L. Gautam, Chairperson, PPV&FR Authority, Dr. Anil Gupta, Vice-Chairman, NIF and Dr. N.N. Singh, Secretary General, TAAS.

Key Recommendations

The important recommendations of the workshop are as under:

- The innovative farmers need more encouragement and periodical financial support for their creativity and therefore, Agriculture Innovation Fund/Board' should established at State and National level to supplement the efforts of such farmers by awards/rewards and providing monitory assistance to them. Best example of this kind of Board already exists in the dairy sector, namely "National Dairy Development Board (NDDB)". **(Action: SDA/ICAR)**
- The Hon'ble Chief Minister of Haryana has made a good beginning in this direction by announcing the formation of "Haryana Agriculture Innovation Fund" to help in building an innovative and creative agrarian society in the state and also to strive to make Haryana a national leader in sustainable agricultural technologies by scouting, spawning and sustaining traditional knowledge and grassroot innovations in agriculture. The responsibility of operating of this fund has been given to Haryana Kisan Ayog. **(Action: Haryana Kisan Ayog)**
- The potential farmer led innovations should be identified, validated, refined and properly documented by the ICAR and SAUs for the benefit of farming community and other stakeholders. **(Action : ICAR, SAUs)**
- Innovative technologies identified in one region need to be popularized in similar eco-regions elsewhere, through publication, documentation and dissemination of "Success Stories". **(Action : ICAR, SAUs)**
- The slogan "Science with Farmers first" and blending of traditional knowledge with modern science and technology through bottom up approach must be ensured and recognized for planning and reorienting research and outreach programmes by the ICAR, SAUs and other organizations for achieving the future nutritional and food security in the country. **(Action : ICAR, SAUs, SDA)**
- There is a need to establish Technology Parks/Food Parks/Incubators for demonstration and refinement of innovative traditional technologies. These parks should have scientific backup for further up scaling and blending of traditional technologies with modern technologies suitably matching with the requirement of market within and outside the country for better income opportunities. **(Action : ICAR, SAUs, SDA)**
- Aggressive programmes for training of rural youth, especially farm women, for post-harvest handling and value addition of the locally available agri-products, kitchen gardening, nursery raising, floriculture, honey-bee, mushroom production, vermi-composting, dairying, back yard poultry etc, will help in linking rural communities to markets for generating higher income. **(Action : ICAR, SAUs, SDA)**

- It is necessary to set up sanitary & phyto sanitary and quality testing laboratories, preferably, in producing zone in each region to test and certify farm products (agri products, organic foods, medicinal plants, dairy products, forest produce, etc.) produced by the local entrepreneurs for which Government, Private Sector and the NGOs support is critical and essential. **(Action : SAUs, SDA)**
- The available valuable knowledge relating to medicinal uses of local herbal plants need to be gathered and documented through appropriate incentive and reward mechanisms before the same is lost forever or remains unknown/hidden. For further strengthening of this area, there is a need to develop processing facilities for preparing primary products and drugs from locally available medicinal plants, especially to treat common ailments. Also patenting and popularizing these value added products in the local markets will benefit both the producers and the consumers. **(Action : SAUs, ICAR, NBPGR, PPV&FRA)**
- The farmers' knowledge must be improved about non-traditional food crops having nutritional and medicinal values, such as Navara rice, small and minor millets and other high value low volume crops. Government should help such farmers in their capacity building and marketing of value added products. **(Action : SAUs, ICAR, SDA)**
- Elite germplasm and varieties identified by the farmers should be registered with NBPGR and PPV&FR Authority, respectively and required quantity of seeds may be deposited in the Gene Bank. The SAUs and ICAR must help the innovative farmers with the help of State Govt. in this endeavor. **(Action: ICAR, SAUs, NBPGR, PPV&FRA)**
- Farms of progressive farmers should be recognized as Centres of Excellence to facilitate the visits of other farmers. The services of farm innovators/ progressive farmers should be utilized as Professor, Experts, Krishi Pracharak or Krishi Mitra by KVKs of ICAR and SAUs. **(Action: ICAR, SAUs)**
- The resource conservation technologies be demonstrated and refined at RRS/KVKs and at the site of progressive farmers. Weed management research and technologies related to DSR should be strengthened by ICAR research institutes and SAU's to help the rice growers. **(Action: SAU/ICAR)**
- Good quality elite males of various indigenous breeds should be made available in the clusters of villages in order to establish profitable dairies / goatries /piggeries. **(Action: SDAH)**
- Scientific livestock/ poultry/fish farming, and animal production and health related technology transfer to farmers needs to be taken up on a massive scale for increasing livestock production and productivity in the State. **(Action: SDAH; Director, Fisheries- Haryana and LLRUVAS)**
- The machinery/equipment required for small Dairy Farm Mechanization, primary level milk processing and value addition should be identified, tested, multiplied and made available to needy farmers on subsidized rate. **(Action: SDAH)**
- Currently, scattered extension and training programmes are being organized by different government organizations and other agencies. There is need to establish workable linkage and centralized training complexes for women farmers and other entrepreneurs in each state. Extension approach needs to be strengthened and reoriented to make them more women friendly. **(Action: State Govt., ICAR, SAU's)**

- Policy for establishment of viable units of integrated farming system by combining need based location specific components of crops, vegetables/flowers, tree crops, livestock, fisheries, poultry, mushroom cultivation, vermicomposting, biogas units etc to train students, youths, women and other farmers at the HQs, RRS and KVKs for developing required skill and entrepreneurship. **(Action: CCS HAU, LLRUVAS, ICAR and SDA).**
- Policy initiatives are needed to support and encourage small cooperative societies, SHGs, Farmer companies for production and multiplication of quality seeds, planting material and establishing value addition, processing and marketing and storage units of horticulture, dairy, fishery and other produce at production sites to help the farmers. **(Action: State Govt.)**
- “Gram Farming Schools” should be opened at least at Panchayat level in Haryana and other States. **(Action: State Govt.)**
- There is need to develop women friendly technologies and disseminating already developed technologies with defined strategy, need-based training and financial support. In this context, the educational tours of interested women farmers to show the units of value added agriproducts and farms of progressive and innovative farmers should be arranged on regular basis to encourage and help them to adopt such technologies. **(Action: DAC with ATMA, SDA, DAHD, Haryana; Director, Fisheries, Haryana, ICAR, SAU’s)**
- A regular mechanism for holding such workshops frequently in each state for scientist-farmer dialogue would certainly accelerate the process of agricultural innovations and hence, be put in place at the national level by the relevant organizations such as Division of Extension of ICAR by involving SAUs, TAAS, NIF, Farmers’ Commission in different States etc. **(Action : ICAR)**
- The innovations made by the farmers should also be protected for their Intellectual Property Rights (IPR), for which SAUs/Kisan Ayog/Farmer Commissions should provide needed awareness, guidance, technical and financial inputs. **(Action : SAUs, PPV&FRA, Farmer Commission)**
- Agro-tourism around farmers’ innovative efforts would not only generate public awareness but will also help in revenue generation and greater community involvement in protecting our rich biodiversity. **(Action : SAUs, SDA)**
- Scientists - farmers interaction may be enhanced through appropriate mechanism so as to get the feedback for research system about the field performance of the technology as well as upscale farmer-led innovations. **(Action : ICAR, SAU)**

Technical Program

Day 1: December 23, 2011

09:00-10:00	Registration
10:00-10:40	Inauguration of Exhibition by Dr. S. Ayyappan , Secretary DARE & DG, ICAR, Round of Exhibition
10:40-11:00	Tea Break

INAUGURAL SESSION

Venue: Indira Gandhi Auditorium, CCSHAU, Hisar

Chief Guest	Dr. Bhupinder Singh Hooda, Hon'ble Chief Minister, Haryana
Co-chair	Dr. R. S. Paroda, Chairman, Haryana Kisan Ayog
Presided Over	Dr. S. Ayyappan, Secretary DARE & DG, ICAR cum
Venue	Indira Gandhi Auditorium, CCS HAU, Hisar

11:00-11:05	Lighting of lamp
11:05-11:10	Invocation
11:10-11:15	Welcome by Dr (Mrs.) Santosh Dhillon, Dean COBS&H, CCSHAU
11:15-11:20	Address by Dr. K. S. Khokhar, VC, CCS HAU
11:20-11:25	About the Workshop: Dr. N. N. Singh, Executive Secretary, TAAS
11:25-11:35	Remarks by Prof. Anil Gupta, Vice Chairman, NIF
11:35-11:40	Remarks by Sh. Roshan Lal, Finance Commissioner and Principal Secretary Agriculture, Govt. of Haryana
11:40-11:45	Remarks by Dr. K. D. Kokate, DDG (Agril. Extn.) ICAR, New Delhi
11:45-11:50	Remarks by Dr. P. L. Gautam, Chairperson, PPV & FR Authority
11:50-12:00	Address by Dr. R. S. Paroda, Chairman, Haryana Kisan Ayog
12:00-12:10	Address by Dr. S. Ayyappan, Secretary DARE & DG, ICAR
12:10-12:25	Release of Publication and Presentation of Award
12:25-12:55	Address by Chief Guest, Dr. Bhupinder Singh Hooda, Hon'ble CM, Haryana
12:55-13:00	Vote of Thanks by Dr. Hardeep Kumar, IAS, VC, LLRUVAS
	<u>National Anthem</u>
13:00-14:15	Lunch (Hosted by CCS HAU)

Technical Session-I

Crop Improvement

Venue: Auditorium, College of Agriculture

Time		
15:00-16:30	Co-chairs	Dr. S. Ayyappan Sh. Roshan Lal
	Panelists	Dr. B. S. Dhillon Sh. Harpal Singh
	Rapporteurs	Dr. A. M. Narula Dr. R. B. Srivastava
	Presentation by Innovative Farmers	Sh. Bhagwan Dass Sh. Virender Singh Sh. Sudhir Chadha Sh. Sunda Ram Sh. P. Narayanan Unny Sh. Sudhir Agarwal Maj. Manmohan
16:30-16:50		Tea Break

Technical Session-II

Livestock, Poultry & Fisheries

Venue: Auditorium, College of Agriculture

16:50-18:15	Co-chairs	Dr. Hardeep Kumar Dr. M. P. Yadav
	Panelists	Dr. A. K. Srivastava Dr. R. K. Sethi
	Rapporteurs	Dr. S. M. Chahal Dr. A. K. Pruthi
	Presentation by Innovative Farmers	Sh. B. MohanSh. Baljit Singh Redhu Sh. Sultan Singh Sh. Dev Narayan Patel Sh. Umesh Sood

Day 2: December 24, 2011

Technical Session-III

Integrated Crop Management

Venue: Auditorium, College of Agriculture

Time		
10:00-11:00	Co-chairs	Dr. P. L. Gautam
		Dr. A.M.Narula
	Panelists	Dr. V. P. Singh
		Sh. Balbir Singh
	Rapporteurs	Dr. J. P. Singh
		Dr. A. S. Dhindwal
	Presentation by Innovative Farmers	Sh. Kanwal Singh Chauhan
		Sh. Vikas Kumar Chaudhary
		Sh. Ramesh Dagar
		Sh. Amarjeet Singh Dhillon
		Sh. Gurcharan Singh
		Sh. Gudiwada N. Naidu
		Sh. Atam Swaroop
11:00-11:20		Tea Break

Technical Session-IV

Women in Agriculture

Venue: Auditorium, College of Agriculture

11:20-13:00	Co-chairs	Dr. K.D. Kokate
		Sh. B. S. Duggal
	Panelists	Dr. Krishna Srinath
		Dr. Indu Sharma
		Mrs. Binder Pal Kaur
	Rapporteurs	Dr. Saroj Jeet Singh
		Dr. Nishi Sethi
	Presentation by Innovative Farmers	Mrs. Kirshna Yadav
		Mrs. Neelam TyagiMrs. Sudesh Malik
		Mrs. Sulochana NehraMrs. Geeta Rana
		Mrs. Indira Bishnoi
13:00-14:15	Lunch	(Hosted by PPV & FRA)

Plenary Session

Presentation of recommendations of different Technical Sessions by Rapporteurs

Venue: Auditorium, College of Agriculture

14:15-16:00	Chairman	Dr. R.S. Paroda
	Co-Chairman	Dr. K.S. Khokhar
	Rapporteurs	Dr. R.K. Kashyap
16:00-16:30	General Discussion	
	Concluding Remarks by Chairs/Co-Chairs and other dignitaries on dais	

Committee for drafting the Proceedings of Workshop

- Dr. D.P.Singh, Consultant, Haryana Kisan Ayog
- Dr. A.M.Narula, Zonal Project Director (ICAR), PAU, Ludhiana
- Dr. (Mrs.) Saroj S. Jeet Singh, Dean COHS, CCSHAU
- Dr. R. B. Srivastava, Associate Director, IPR & PI, BPD Unit, CCSHAU

Annexure-I

LIST OF FARMERS

S.N.	Name of the Farmer	Address of the Farmer	Contact No.
1.	Sh. Bhagwan Dass	Secretary, Young Farmer Association, Vill. Rakhra, Nabha Road, District, Patiala	0175-2364200 98152-36307
2.	Maj. Manmohan Singh	Vill. Pher Warriayan, P.O. Vashioa, Tehsil. Ajnala, Dist. Amritsar	98552-51092
3.	Sh. Amarjeet Singh Dhillon	Dhillon Farm, Vill. Bargari, District, Faridkot	98143-22390
4.	Sh. Pal Singh	Opp. Gurudwara, 6th Pathshahi, Kurukshetra	98127-00028
5.	Sh. Atam Swaroop	Vill. Mahog, P.O. Chail, District. Solan	98057-12644
6.	Sh. Ram Kisan	Village Jamalpur, P.O. Gundiana Tehsil. Jagadhri, Yamunanagar	098128-81260
7.	Sh. Umesh Sood	Village, Bashing, P.O. Babeli, Tehsil/Distt. Kullu (HP)	098162-54302
8.	Mrs. Krishna	Sri, Krishna Pickles, H.No. 1, Bhawani Nagar, Vill Dinpur, Nazafgarh, New Delhi-110043	98684-94021
9.	Sh. Radhey Mahto	c/o KVK Giridih, Birsa Agricultural University, Jharkhand	
10.	Sh. Binoy Krishna	c/o KVK North 24 Parganas, WBUA & FS, Kolkata, West Bengal	
11.	Sh. Tavesii Vadeo	SAWO Manufacturing Unit, Sakraba Village, Dist. Phek, Nagaland	094362-04326
12.	Sh. Arun Kumar Kamboj	Rishi Prarashar Javik Krishi Sodh Samiti, Village-Chakarapur P.O.- Bazpur, Block Bazpur, Distt. Udham Singh Nagar-263153 (Uttarakhand)	098970-49791
13.	Sh. Dev Narayan Patel	Village-Bachan Khera, P.O. Adampurjanubi, Distt. Lucknow-227307 (UP)	099357-67527
14.	Sh. Jagdish Singh	Village & P.O. Chakwa Bujurg, Block-Basrehar, Distt. Etawah-306253(U.P.)	094576-19463
15.	Sh. Gudivada N. Naidu	Taramathipet Village, Hayatnagar Mandal, Ranga Reddy District, Andhra Pradesh	9440424463 040-24063963
16.	Sh. Madan Lal Deora	Village- Nimaj, Distt. Pali- Marwar, Rajasthan	092146-61762
17.	Sh. Devalbhai Alabhai	Ambaliya, Village-Viramdal, Talkua-Jam-Khambhalia, Dist. Jamnagar, Gujarat	094272-39310

18.	Sh. Anand Singh Thakur	Village-Umariya Khurd, Post Doodhia, Dist. Indore (M.P.)	9301301901
19.	Sh. Gourav Sharma	Village: Phutatal, Block; Panagar, Distt. Jabalpur (M.P.)	94251-59907
20.	Sh. S. Muthusamy	Post Thalampady Namakkal Dist. Tamil Nadu	04286-224459 04286-224459
21.	Sh. Virender Singh	S/o Sh Sada Nand, Vill. Narangpur, Distt Gurgaon	9311182543
22.	Sh. Balbir Singh	S/o Hari Singh, V.P.O Shyarwa, Tehsil/Distt Hisar	
23.	Sh. Sultan Singh	Vill. Butana, Tehsil Nilokheri Dist Karnal	9812032544
24.	Sh. Baljit Singh Redhu	House No.2153, Urban Estate, JIND baljitredu@yahoo.com	9416061280
25.	Shri Kawal Singh Chauhan	Vill.Aterna, Block Rai, Sonapat, Haryana	09416314843
26.	Sh. Vikas Kumar Choudhary	Society for Conservation of Natural Resources and Empowering Rural Youth, Taraori, Karnal	9416032593
27.	Mr.Jagdish Parikh	Vill. Ajitgarh, Tehsil. Shri Madhopur, Distt. Sikar, Rajasthan	09950323338
28.	Shri Kallu Khan	Vill. Jewali, Post Kumas(Jangir), Via- Nechhawa, Distt. Sikar, Rajasthan	
29.	Shri Devaramji Gadhwal	Vill.Jewali, Post- Kumas(Jagir), Via- Nechhawa, Distt. Sikar, Rajasthan	9252174324 9982827472
30.	Shri Ajaib Singh	Vill. Danoura, Post- Laha, Tehsil. Narayangarh, Dist. Ambala(Haryana)	0989675208 01734-286686
31.	Shri Prakash Singh Raghuvanshi	Vill. Tadiya, Dhandhorpur, Post- Jakhhini, Distt.Varansi, Uttar Pradesh-221305	09839253974 09835609882
32.	Shri Chedilal Rajput	Prabhat seed store 7/283, Vikash Nagar Jhinhak, Kanpur Dehat, Uttar Pradesh	09935241535
33.	Shri Sunda Ram Verma	Vill. Post Danta, Distt. Sikar, Rajasthan	01577-270074 09414901764
34.	M/s Kir Community	VPO, Med (Dhani Ragalawali), Tehsil. Viratnagar, Distt. Jaipur, Rajasthan,	09829312425 9214742537
35.	Shri Manaram Chaudhary	Vill.and Post Rashipura, Distt. Sikar, Rajasthan	
36.	Shri Jai Prakash Singh	Vill.Tadiya, Dhandhorpur, PO. Jakhhini, Distt. Varansi, Uttar Pradesh-221305	09335333952 0542-2635076
37.	Shri Rajkumar Rathore	Near Mata Mandir, Galla Mandi, Sehore, Madhya Pradesh	466 001 0940652891
38.	Shri Dadaji Khobragade	Vill. & Post Nanded, Talluka - Nagbhid, Via- Talodhi Balapur, Distt. Chandrapur, Maharashtra	

39.	Shri Jayesh Bhai Patel	Vill. Bharadiya, Tehsil Valiya, Distt. Bharuch, Gujarat	02643 273333 9913047133
40.	Shri Dhirajlal Thumar	Vill. Pipla Lag, Taluka & Distt. Amreli, Gujarat	9825513469
41.	Shri Darshan Singh Grewal	Radha Swami Satsang, House Sirsa, Haryana. grewalsingh@yahoo.co.in	9050101355 9891928634
42.	Sh. Dharampal Tyagi	S/o Sh. Kalu Ram Tyagi, Vill. Badshash Pur Kheri Kala, Distt. Faridabad, Haryana	9313032710
43.	Shri Sudhir Aggarwal	70, Vikas Bazar Mathura, U.P. sudhiragarwal.56@gmail.com	9412278153
44.	Shri Sudhir Chadha	Chadha Seed Farm, Vill. Paratap Pur, P.O. Chakulwa Via Haldwani, Tehsil. Kaladhugi. Distt. Nainital (Uttarakhand)	9319080924 9917106077
45.	Mrs. Neelam Tyagi	Lakshmi Jan kalian Seva Sasthan Raoli Road, Gali No.5, Near Choudhary Transport Muradnagar, Ghaziabad. neelamtyagi94@gmail.com	9411244348 9411244365
46.	Sh. Hukum Singh Lodha	Vill. Sitara, Post Palla, Tehsil Kumtere, Distt. Bharatpur, Rajasthan	
47.	Shri P. Narayanan Unny	Shri P. Narayanan Unny, Navara Eco Farm, Karukamini Kalam Chittor College P.O., Distt.- Pallakad, Kerala-678104	
48.	Sh. M. K. Tyagi	M.S. Tyagi Foundation(Regd. NGO), 3347/Sec.3, Faridabad, Haryana	
49.	Sh. Ramesh Dagar	S/O Sh. Banwari Lal, VPO: Akbarpur-Barota, Dist. Sonapat	9968806664
50.	Sh. Gurcharan Singh	VPO: Brass, Tehsil Nissing, Distt. Karnal	9896081873
51.	Sh. Ishwar Kundu	S/O Sh. Pirthi Singh, VPO Kailram, Dist. Kaithal	
52.	Mrs. Sudesh Malik	W/o Sh. Subhash Chand, VPO: Nidana, Dist. JIND	9467504327
53.	Sh. Dayanand Namberdar	V.P.O. Kumbha Khera Via Uklana Mandi (Hisar)	9812231660
54.	Sh. Balbir Singh Garhwal	S/O Sh. Kurda Ram VPO Dolatpur, Fatehabad	9466006370
55.	Sh. Kali Ram	S/o Sh. Kidar Singh, V.P.O. Padana Tehsil/Distt. Jind	9416137521
56.	Sh. Karan Dev Kamboj	S/o Sh. Shardha Nand, V&PO Mandhar, via Radaur (Dist. Yamunanagar)	9416267208
57.	Sh. Harkesh Singh	S/o Sh. Gurcharan Singh, V.P.O. Mohari (Teja- Mohari) Ambala	9896811117 9416022379
58.	Sh. Gurdyal Singh	S/o Balak Ram VPO Umri, Thanesar Distt. Kurukshetra	9812080465
59.	Sh. Illam Singh	S/o Sh. Hirda Ram Gorsli, V. P.O. Tikri Tehsil/Distt. Karnal	09416217849 09813101872

60.	Sh. Satnarain	S/o Sunder Dass, Village Barana Tehsil/ Distt. Panipat	9416286855
61.	Sh. Hamid	S/o Sh. Nathu Ram, V.P.O. Mukandpur Distt. Jhajjar	9416132027
62.	Sh. Hem Dagar	H.No. 2, Block - J, Sector - 10 DLF Faridabad.	09811423745
63.	Sh. Man Singh	S/O Sh. Lakhi Ram VPO Daboda Taluk Nagar, Tehsil Farukhnagar, Gurgaon	9350582231
64.	Sh. Tayyub Hussain	S/O Sh. Fajruddin Village Meoli PO Askeda, Tehsil. Nuh Distt, Mewat	09255737397
65.	Sh. Dharm Pal	S/o Sh. Lal Singh Vill. Kapriwas Tehsil/ Distt Rewari	09416478923
66.	Sh. Ram Gopal Sharma	V.P.O. Batwal Distt. Panchkula	09466016041
67.	Sh. Surinder Singh	S/o Makhan Singh C/o Surinder & Co. Petrol Pump, Near Railway Crossing, Hisar Road, Sirsa	9416045751
68.	Sh. Jaikaran	S/o Ram Singh (Vice president) Vill Kansala Distt. Rohtak	9813638298
69.	Sh. Suresh Kumar	S/O Phool Chand Vill. Haripur P.O. Golagarh Tehsil/ Distt.Bhiwani	9812119013
70.	Sh. Rati Ram	S/o Het Ram VPO Dongli Block Nangal Choudhary, Mohindragarh	9416939729
71.	Sh. Rajbir Singh	S/o Sh. Umrao Singh, VPO Basirpur Distt. Mohindergarh	9416576571
72.	Sh. Ram Mehar	S/o Sh. Bharat Singh VPO Bauhapar, Panipat	
73.	Smt. Reshma	W/o Sh. Rameshwar VPO Ujha, Panipat	
74.	Sh. Kushal Pal Sirohi	S/o Harender Singh Sirohi, Sirohi Farm, Vill. Chandana, Distt. Kaithal	09812022221
75.	Sh. Fakir Chand	S/o Sh Chandagi Ram, VPO Kelram Distt. Kaithal	09467765099
76.	Sh. Bijender Singh Dalal	VPO Kithwari Distt. Palwal	09416103573
77.	Sh. Mukesh Kumar	Vill. Manijhawali, PO Tigaon, Distt. Faridabad	08059142524
78.	Sh. Mahender Singh	S/o Sh. Mani Ram, VPO Rasina Distt. Kaithal	
79.	Sh. Hari Singh	S/o Sh. Gurcharan Singh Vill. Nagpur, Distt. Fatehabad	
80.	Sh. Harpal Singh	Vill Bohar Sadan, Tehsil Pehowa, Distt Kurukshetra	
81.	Mrs. Binder Pal Kaur	Jalandhar, Punjab	
82.	Mrs. Sulochna Nehra	V.P.O Sunderheti, Distt. Jhajjar, Haryana	
83.	Mrs Geeta Rana	Sirsa Haryana	
84.	Mrs Indira Bishnoi	CCS HAU, Hisar	

85.	Sh. Bhag Singh	S/o Arjun Singh Vill. Dangdhri P.O. Kukru Ambala	9416550466
86.	Sh. Satyavir Dagar	Vill. Jhadd Sately (near PNB) Faridabad	9211153701
87.	Smt. Geeta Chauhan	Faridabad	
88.	Sh. Rishi Raj Tyagi	S/o Pat Ram Vill. Karnera P.O. Ballabgarh Faridabad	9278793170
89.	Sh. Anoop Singh	S/o Nihal Singh V.P.O. Kamod Tehsil Dadri Bhiwani	9991665944
90.	Sh. Manoj Nagpal	Bhiwani	
91.	Sh. Nathu Ram	Bhiwani	
92.	Sh. Rajbir Singh Pannu	Bhiwani	
93.	Sh. Sanjeev Sangwan	Bhiwani	
94.	Sh. Sankar	Bhiwani	
95.	Sh. Narender Singh	Fatehabad	
96.	Sh. Ram Kumar	Fatehabad	
97.	Sh. Sukhbinder Singh	S/o Agyab Singh, Ashok Nagar, Majra Road, Fatehabad	9416045244
98.	Sh. Suraj Bhan	Fatehabad	
99.	Sh. Trilok Chand	Fatehabad	
100.	Sh. Sunil Kumar	Gurgaon	
101.	Sh. Ved Pal	Jhajjar	
102.	Smt. Poonam	Jhajjar	
103.	Sh. Harminder Singh	Jind	
104.	Sh. Pawan Kumar	Jind	
105.	Sh. Kalu Ram	Hisar	
106.	Sh. Daljeet Singh	Hisar	
107.	Sh. Rajender Singh	Hisar	
108.	Sh. Ram Prasad Beniwal	Hisar	
109.	Sh. Ranbir Singh	Hisar	
110.	Sh. Kuldeep Dhariwal	Kaithal	
111.	Sh. Rameshwar Arya	Kaithal	
112.	Sh. Surender Singh	Kaithal	

113.	Sh. Prishit	Karnal	
114.	Sh. Sahil Singh Saini	Vill. Bharru Majra P.O. Umra, Kurukshetra	9416550466
115.	Sh. Saher Khan	S/o Munohi Khan Vill. Badarpur Tehsil Nagina, Mewat	9466376342
116.	Sh. Banwari Lal	Mohindergarh	
117.	Sh. Rajkumar	S/o Ishwar Singh V.P.O. Dongra Aher Mohindergarh	9467541286
118.	Sh. Bijan Singh	Nagal jat, Palwal	
119.	Sh. Ramesh Chauhan	V.P.O. Gopalgargh, Palwal	9416448453
120.	Sh. Jitender	S/o Shish Ram V.P.O. Seenakh Panipat	9416286855
121.	Sh. Bhupinder	S/o Sh. Khushi Ram Vill. Bharawas, Rewari	9466376342
122.	Sh. Shiv kumar	Rewari	
123.	Sh. Ram Mehar	Rewari	
124.	Sh. Baldev Rai Dua	S/o Nand Lal Dua, V.P.O. Bainsi Rohtak	9416104712
125.	Sh. Om Prakash Gehlawat	Rohtak	
126.	Sh. Jagat Pal	S/o Sh. Hari Singh, V.P.O. Kharia, Sirsa	
127.	Sh. Dharamveer Kamboj	Yamuna Nagar	
128.	Sh. Milkha Singh	S/o Surender Singh, Vill. Gilore, Yamuna Nagar	9354867785
129.	Sh. N.G. Ranga	Andhra Pradesh	
130.	Sh. Bhahanamjava	Andhra Pradesh	
131.	Sh. G. Noyanethnam	Andhra Pradesh	
132.	Sh. Goverdhan Yadav	Ujwa, Delhi	
133.	Sh. Rakesh Singh	New Delhi	
134.	Sh. Janardan Singh	Badgaon Udaipur	
135.	Sh. Ram Swami Sikkae	Rajasthan	
136.	Smt. Anita Rani	Vill. Bar Marware, Rajasthan	9252065625
137.	Sh. Darshan Singh	Vill. Ghulal, P. O. Samrala, Ludhiana	





