



# *Regional Workshop on* **Motivating and Attracting Youth in Agriculture (MAYA) in North India**

Pal Auditorium  
Punjab Agricultural University, Ludhiana  
February 28-29, 2020

## **Proceedings and Recommendations**

*Organizers*  
Punjab Agricultural University  
ICAR-Agricultural Technology Application Research Institute  
Trust for Advancement of Agriculture Sciences (TAAS)





## PUNJAB AGRICULTURAL UNIVERSITY LUDHIANA

- Established in 1962 to serve the state of erstwhile Punjab
- Inaugurated by Pt. Jawahar Lal Nehru, Prime Minister of India on July 8, 1963
- In February 1970, Haryana Agricultural University carved out by an Act of Parliament
- In July 1970, HP Krishi Vishvavidalya established at Palampur campus
- In 2006, the College of Veterinary Sciences upgraded as Guru Angad Dev Veterinary and Animal Science University at Ludhiana
- Modelled on the pattern of land grant colleges in US
- Has played a key role in increasing food production in Punjab state and ushering in an era of Green Revolution in India
- Has made notable contributions in increasing livestock and poultry production in the state
- In 1995, was adjudged as Best Agricultural University in India



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# Foreword

India has the largest population of youth (356 million between 10-24 years) in the world as per the United Nations Population Fund. Hence, any developmental agenda cannot be complete without giving due consideration to the large young human resource. This demographic advantage obviously reflects a bright future, provided the youth living in rural areas (around 200 million) are motivated and professionally attracted to agriculture.

India is predominantly an agrarian country with majority of the population dependant on agriculture and allied sectors. Punjab Agricultural University (PAU), Ludhiana has been in the forefront in the development of agriculture in the country. It has played a pivotal role in ushering in an era of Green Revolution in the country and thereafter, transforming a food-deficit nation into a food-surplus one. In recent years, PAU has successfully focused on the development of technologies for enhanced water use efficiency, efficient crop residue management, integrated crop pest management, etc.

In the face of a rapid shift of our youth towards white collared more profitable professions, a two-day Regional Workshop on the theme of 'Motivating and Attracting Youth in Agriculture' (MAYA) was jointly organized by the Trust for Advancement of Agricultural Sciences (TAAS), ICAR-Agricultural Technology Application Research Institute (ICAR-ATARI), and PAU at the University campus, Ludhiana, from February 28-29, 2020.

The workshop successfully addressed the following primary objectives: (i) assessing the role of youth in accelerating overall agricultural growth; (ii) providing exposure to various successful entrepreneurship models; (iii) understanding the role of youth in rural advisory services and for knowledge linking farmers to markets; (iv) suggesting needed policy reorientation to motivate and attract youth in agriculture and (v) exploring the possibility to build a regional platform.

The workshop assumed increased significance as it primarily focused on the need for a paradigm shift from the narrow focus on 'Youth as a Farmer' to 'Youth as an Agripreneur'.

There were wide ranging discussions on various topics including need to create an atmosphere for our youth which will re-unite them back to their roots; inculcate an inclination in our youth to adopt agriculture with transformative and translational

changes, thereby, making agriculture more diverse and profitable, and create employment opportunities for the youths. I am hopeful that the graded change that has already set in, shall necessitate the drafting and implementation of required policies, incentives and rewards to attract young talent to undertake technology led farming that is not only profitable and sustainable, but also respectable.

The TAAS, under the able leadership of Dr RS Paroda, its Chairman, is committed to face daunting challenges faced by agriculture and its allied sectors. Dr Paroda conceived the idea of this workshop and entrusted PAU, the task of organizing this workshop. Active support for organizing the workshop was also provided by ICAR-ATARI which is actively involved in planning, monitoring, reviewing and evaluating the ICAR sponsored transfer of technology projects in collaboration with agricultural universities through *Krishi Vigyan Kendras* (KVKs) in Punjab, Uttarakhand, Himachal Pradesh and Jammu & Kashmir.

The workshop, attended by 313 participants from various parts of the country, has not only achieved its envisaged outcomes, but has also paved way for more insightful deliberations.

I profusely thank TAAS and ICAR-ATARI, our co-organizers, delegates and participants for their contributions in manifold ways in the successful organization of this workshop. I also thank Dr (Ms) Ravinder Kaur Dhaliwal, Director, Students' Welfare, PAU, for the organization and smooth conduct of the workshop. I am sure this publication will be of use to researchers, policy planners, development agencies, entrepreneurs, farmers, students and other stakeholders.

**Baldev Singh Dhillon**

Vice Chancellor

Punjab Agricultural University, Ludhiana

## **Regional Workshop on Motivating and Attracting Youth in Agriculture (MAYA) in North India**

### **BACKGROUND**

India has the world's largest youth population with 356 million people in the age group of 10-24 years (UN report, 2014). Out of this, almost 200 million young people live in the rural India. These population parameters indicate the presence of demographic dividend in India. The potential economic gains can be realised through a "demographic dividend", which can occur when a country's working age population is larger than the population that is dependent. Young people are the innovators, creators, builders and leaders of the future. But they can transform the future only if they have skills, good health, decision-making ability and real choices in life. In order to maximise the dividend, it must be ensured that our youth is equipped to seize opportunities for jobs and other income-earning possibilities.

Though this projects a bright future, yet relatively few young people (around 5%) prefer to remain in agriculture. The major reasons attributed to this are: decreasing income, greater risk due to adverse climatic factors, poor rural infrastructure and lack of enabling policy environment. Obviously, youth do not find agriculture a creative, profitable and esteemed/white collared profession, besides relatively poor living conditions. At the same time, present day agriculture is faced with numerous challenges such as over-exploitation of natural resources (land, water and agrobiodiversity), a continued decline in factor productivity, expensive inputs versus low returns, and production uncertainties due to adverse effects of climate variability. The ageing agricultural practices coupled with the decreasing interest of youth in agriculture having multi-faceted challenges are the serious threats for sustainability of Indian agriculture.

In order to be economically attractive and sustainable, Indian farming needs to become resilient, diversified and intellectually satisfying too. Agricultural transformation needs to revolve around rewarding jobs/ entrepreneurship in agro-based value chain activities, better social amenities in

rural areas, increased public and private sector investments in agriculture and rural infrastructure, establishment of small agro-based firms with better linkage mechanisms with markets, etc. The basic educational and training standards need to be improved for reorienting agricultural education towards agro-based food and value chain systems; inculcating efficiency in financial, social and environmental terms; reorienting social security programs with increased labour market flexibility and ensuring egalitarian distribution of income.

Agricultural extension system also needs to transform into an innovative platform that delivers technology based demand driven knowledge and services in order to empower and motivate rural youth. Empowering youth through vocational training and building a cadre of ‘Agricultural Technology Agents’ to provide technical backstopping as well as custom hiring services to the smallholder farmers would go a long way in linking research with extension and thereby accelerating agricultural growth. It is high time for Agricultural Technology Agents to become job creators instead of job seekers.

To meet the twin challenges of sustainable agriculture development and to motivate and attract youth in agriculture, a “Regional Workshop on Motivating and Attracting Youth in Agriculture (MAYA) in North India” was organized jointly by the Punjab Agricultural University (PAU) Ludhiana, the Trust for Advancement of Agricultural Sciences (TAAS), New Delhi and the ICAR-Agricultural Technology Application Research Institute (ATARI) at PAU, Ludhiana on February 28-29, 2020. This workshop provided an opportunity to all the stakeholders to interact and discuss various options and avenues for not only attracting youth to agriculture but even motivating them towards entrepreneurship options in agriculture and allied sectors. The senior research, development and policy related officials/ managers from National Organizations, State Agricultural Universities, Education and Training Institutions, Civil Society Organizations (CSOs) including Non-Governmental Organizations (NGOs) and Farmers Organizations (FOs) participated in this workshop. The private sector representatives were specifically invited to discuss various ways to motivate, attract and retain youth in agriculture.

## **EXHIBITION ON POTENTIAL AGRI-ENTERPRISES**

After the floral welcome, the Chief Guest Dr RS Paroda, Chairman, TAAS inaugurated the exhibition on “**Potential Agri-enterprises**”. He was accompanied by Dr Balwinder Singh Sidhu, Agriculture Commissioner, Punjab; Dr Parvinder Kaushal, Vice Chancellor, Dr YS Parmar University of Horticulture and Forestry, Solan; Dr Bhag Mal, Senior Consultant, TAAS; Dr Rajbir Singh, Director, ICAR-ATARI; Dr RK Dhaliwal, Director Students’ Welfare, PAU and other dignitaries. The exhibition showcased the

entrepreneurial ventures of “Attracting and Retaining Youth in Agriculture (ARYA)” program, wherein entrepreneurs from Punjab, Himachal Pradesh, Uttarakhand and Jammu and Kashmir participated. They briefed the Chief Guest about the inception of the venture, value added products, earnings and active involvement of farmers.

## **INAUGURAL SESSION**

Dr RK Dhaliwal, Director Students’ Welfare, PAU, Ludhiana extended a warm welcome to the Chief Guest, dignitaries, faculty, students and the farmers. While deliberating the purpose of the event on MAYA, she expressed that in Punjab, the cradle of agriculture in India, at least 15-20 per cent of the youth must be involved in agriculture sector. She added that youth deviating from agriculture is a global phenomenon, and therefore, all efforts are being made to attract and retain youth in agriculture, and for that there is a need to reorient agricultural education and policies. Actually, youth needs agriculture as much as agriculture needs youth. Dr Dhaliwal further emphasized to create jobs in agriculture, since youth is the power of a nation and have the potential to revolutionize agriculture in India.

Padma Shri Dr Baldev Singh Dhillon, Vice Chancellor, PAU remarked that agriculture provides an opportunity to generate employment as well as income and stated that education imparted should be practical, developing innovative skills among youth. While emphasizing that the youth must be versatile, he mentioned that MAYA is the brainchild of Dr Paroda. The role of youth in accelerating agricultural growth cannot be underestimated. In fact, those nations have progressed much faster where youth has been motivated and involved in creative, secondary and specialty agriculture supported well by an enabling policy environment. The time has come when agriculture outlook has to be changed towards “agri-entrepreneurship” that can provide options to youth from “job-seeker” to “job-provider” and also to address the issues of second generation problems arising as the after effects of Green Revolution. Dr Dhillon further added that there is a need to adopt innovative ways across the value chain (R&D, access to inputs, production, marketing, wholesale distribution, retail and traceability) as well as supply chain management; communication, awareness and marketing; information management; finance and risk mitigation.

Dr Balwinder Singh Sidhu, Agriculture Commissioner, Punjab and the Guest of Honour, indicated that India is facing competition from international players and there is a need to re-build the economy. Further, there is a need to lay greater emphasis on skill enhancement in order to enable youth to contribute economically. Dr Sidhu expressed his concern over the effect of multinational companies on small and medium industries. Migration of the skilled and educated youth to other countries

is also a matter of concern for the economy. To attract youth in agriculture, it should be made socially and economically viable and it should be treated as a proud profession in the society. Imparting skills to youth and making them employable can help the economy of the country. He emphasized that the education must focus on providing opportunities for employment to the students. Females being about 50 per cent of the Indian youth, it is of utmost importance to find ways for their empowerment so as to enable them to contribute in the national economy.

Dr Parvinder Kaushal, Vice Chancellor, Dr YS Parmar University of Horticulture and Forestry, Solan, and special guest of the function, said the population of youth is the highest in rural areas and they usually migrate to urban areas in search of jobs and get employed mostly as skilled workers. To check their migration, there is a need to attract youth to remain in agriculture and for this, skill development and entrepreneurship are vital. Agriculture needs to be considered as an honourable profession by the society. This change of thought of the society towards agriculture will motivate the youth in adopting it. The youngsters must learn from the successful agricultural entrepreneurs, who are earning more money and having high turnovers and are, thus, contributing to the economy a great deal. While concluding, Dr Kaushal said that education curricula may include skill development and entrepreneurship and orientation should start from the second year of graduate students, so that students must develop a mind-set of 'job providers' and should not restrict themselves as 'job seekers'.

Padam Bhushan Dr RS Paroda, Chairman, TAAS and former Secretary, Department of Agriculture Research and Education, (DARE), Government of India and Director General, ICAR in his inaugural address emphasized that there are many challenges in agriculture but at the same time there are tremendous opportunities also. We need to motivate the youth to come forward for post-harvest processing and marketing. We need to re-build entrepreneurship. Sharing his experience, he said, "Hemet a young farmer is earning INR 20 lakh annually. This amply shows that agriculture is a profitable profession." He apprised the youth, "If there is MAYA (Motivating and Attracting Youth in Agriculture), only then your MAYA (income) will increase". Dr Paroda further observed that crop diversification was not picking up due to lack of knowledge, training and experience. He suggested deputing young graduates to guide the farmers and contribute to their welfare. He also recalled his meeting with the farmers who said, "We don't need subsidy, we need knowledge." If the farmers are given good knowledge about increasing their income, they can increase their livelihood and in this way, the youth can be attracted to the profession. The youth is willing to work in agriculture provided they are given a right guidance and direction. Post production value addition in agriculture is a challenge which needs

to be worked upon. The proper linkage of the agriculture produce to the market is a must if we want to increase the income from agriculture. Consequent to his continuous interaction with the farmers, Dr Paroda quoted that the agriculturists of our country need to learn about marketing, because without the knowledge of marketing, farmers will not be able to sell their produce at right price. The youngsters need to learn from the success stories of the farmers who have made great achievements as agricultural entrepreneurs and are providing jobs to others as well. In his concluding remarks, Dr Paroda opined that youngsters need to learn the new technologies like Artificial Intelligence (AI), Big Data Management, etc. and can explore new opportunities to become “agri- entrepreneurs”.

Dr Rajbir Singh, Director, ICAR-ATARI, proposed a vote of thanks. He profusely thanked the Chief Guest, dignitaries, distinguished invitees, co-chairs, panelists, speakers, rapporteurs and all the participants. He lauded the efforts of Dr RS Paroda in providing the needed guidance to organise this workshop on MAYA. He expressed that this opportunity will definitely bridge the gap between planners and the stakeholders, particularly, the rural youth. He said that it is high time to motivate youth to contribute to agriculture’s prosperity. He emphasized that there is a lot to learn from the dignitaries and successful farmers. He also thanked the members of organising committee of MAYA 2020 and all others associated with the organization of the workshop.

## **TECHNICAL SESSION-1: OPTIONS FOR RETAINING YOUTH IN AGRICULTURE**

**Chair** : Dr Parvinder Kaushal, Vice Chancellor, YS Parmar University of Horticulture and Forestry, Nauni, Solan, HP

**Co-Chair** : Dr Bhag Mal, Senior Consultant, TAAS, New Delhi

**Rapporteurs** : Dr Manmeet Kaur, Associate Professor, PAU, Ludhiana  
Dr Lopamudra Mohapatra, Assistant Professor, PAU, Ludhiana

In this session, six presentations were made which included two lead speakers. The speakers shared their rich experiences regarding enormous opportunities for retaining youth in agriculture.

The first lead speaker Padma Shri awardee Sh Kawal Singh Chauhan from Aterna, Sonipat shared his efforts in developing profitable model of baby corn which has been replicated in cluster of villages and explained how he defused the challenges during the journey. He urged that the youth should be motivated and prepared to avail the opportunities coming on their way. They should be self-reliant and skilful enough to make effective use of these opportunities. They need to be given opportunities in

processing sector as they are more remunerative.

The second lead speaker Dr Samunder Singh, Former Head, Department of Agronomy, CCSHAU, Hisar suggested that youth can be motivated to take up diversified crops like *quinoa*, *amaranthus*, etc. which are becoming popular among the consumers owing to nutritional awareness. The educated youth of today can enter into ventures like seed production, fisheries and advanced dairy management. He explained the scope of scientific application of pesticides/weedicides and associated opportunities including use of the latest technologies like drones, remote sensing for identification of pest attack, etc. He urged the youth to empower themselves with the latest technologies and start new ventures.

Dr DS Dahiya, Director Students' Welfare, CCSHAU, Hisar stressed upon the use of digital platforms by the youth for self-training and marketing of products. He recommended that apart from technical skill building in the youth, it is important to motivate them for diverse career opportunities and self-employment through behavioural training. He shared some of the success stories of students who excelled in their profession and urged to transform them with the latest technologies.

Dr Vishal Bector, Professor, FM&PE, COAET, PAU, Ludhiana opined that vast opportunities are available for youth from service providers to skilled operators and mechanics as the agriculture is becoming totally mechanized. He also stressed on harnessing market intelligence among the youth. He recommended a strong networking between the experienced generation and the youth for a better future.

Dr Sandeep Kapur, Former Director, School of Business Studies & Comptroller, PAU, Ludhiana stressed upon the multidisciplinary and collaborative approach to identify the opportunities as the market for agricultural produce is seeing a shift in the value chain globally.

Dr Rajbir Singh, Director, ICAR-ATARI, Ludhiana highlighted the achievements of ARYA and said there is a need of a congenial policy environment and recognition for the youth to retain them in agriculture. A positive reinforcement can encourage the youth to gain new heights in this sector.

In nutshell, the session stressed upon the need to lay greater emphasis on social and behavioural sciences to bring a desirable change in the attitude of the youth towards agriculture and prepare them to grab the varied opportunities coming their way through technical and soft skills such as team building, work culture, business acumen and entrepreneurial skills.

## **TECHNICAL SESSION-2: INITIATIVES ON YOUTH EMPOWERMENT IN NORTHERN REGION**

**Chair** : Dr NS Bains, Director of Research, PAU, Ludhiana

**Co-Chair** : Dr Ashwani Kumar, Former Director, ICAR-IIWM, Bhubaneswar

**Rapporteurs** : Dr Sandeep Mann, Principal Scientist, ICAR-CIPHET, Ludhiana  
Dr Lopamudra Mohapatra, Assistant Professor, PAU, Ludhiana

A total of 10 speakers including two lead speakers made their presentations in this session.

Padma Shri awardee Sh Sultan Singh from Butana, Karnal who holds a fish farm, and developed his own brand “Fish Bite” laid emphasis that less land holding is not a constraint for any agri-preneur. He recommended Recirculatory Aquaculture System Technology (RAST) as a grass root model which has shown potential in Punjab a great deal. The youth has to come forward to explore and adopt such ventures. He cited many constraints during his journey when he started fishery as a profession and how he was once a laughing stock in the village, but due to his utter determination, he got inspired and established himself as a leading exporter.

Dr RK Singh, Director, ICAR-CIPHET, Ludhiana stressed upon the secondary agriculture which can be a promising avenue for employment generation among the youth. Various prototypes for processing have been developed, viz; *makhana* processing, pectin extraction from citrus peel, green pea and cow pea de-podder which can be upscaled further and fed into the agri start-up system.

A paradigm shift has to be there from “Cafeteria Agriculture” to “resource efficient agribusiness” for meeting the aspirations of rural youth as stated by Dr Jai Singh, former Director, CIPHET, Ludhiana. The gaps and problems in agriculture need to be identified so as to provide an entrepreneurial opportunity for the youth. Agriculture Skill Council of India (ASCI), a major organization with high investment from government, must attract youth to reap the benefits of it. It is further suggested that this major challenge can be met by devising more congenial environment for farm workers.

Dr HS Sidhu from Borlaug Institute of South Asia (BISA) highlighted the role of international organizations in targeting the youth in agriculture for sustaining their livelihood. He suggested that the present educational system needs to address the needed conditioning and motivation among the youth so that they can harness the existing opportunities in agriculture. A modernized, convenient and more youth attracting agricultural technologies are required. He emphasised that modernization of agriculture is required for motivating and attracting youth to adopt agriculture as

a profession.

“Road Side Display” model suggested by Dr HS Dhaliwal, Director, PAMETI can link the young farmers to market since it acts as a direct sale outlet. But, it needs to be supported by funding from government so that it can be upscaled. Social media and e-commerce platforms can be used for marketing of the agriculture produce, so it can be an avenue of agri- start- ups under digital platform.

Sh Parveen Bhatia from National Bank for Agriculture and Rural Development (NABARD) explained various efforts and projects to enable youth to start their own venture in agriculture and allied fields. He cited many such examples of youth who established their own enterprises and got huge success. He visualized that agri-clinic and agri-business centres at block levels can play catalytic role among youth for guiding farmers towards more scientific cultivation. The information available on social media needs proper verification. Insights into digital information have to be sustainable, thus calling for knowledge partnership, input provisioning and product aggregation combined with congenial policy environment for evolving effective agri-preneurship as a way forward.

### **TECHNICAL SESSION-3: INNOVATIVE AGRIPRENEURSHIP-FARMERS' EXPERIENCES**

**Chair** : Dr RK Singh, Director-ICAR, CIPHET, Ludhiana

**Co-Chair** : Dr Jai Singh, Farmer Director, ICAR-CIPHET, Ludhiana

**Rapporteurs** : Dr Dharminder Singh, Associate Professor, PAU, Ludhiana  
Dr Manmeet Kaur, Associate Professor, PAU, Ludhiana

In this session, six presentations were made.

Sh Vishavjit Singh, a young farmer discussed his 120 acre well diversified and organic farming model of “Jyani Natural Farm” in Fazilka. He emphasised that eco-tourism can be a good source of earning and can be taken up by progressive farmers. There are lakhs of people visiting Golden Temple, Amritsar. Persons living away from rural areas and Non-Resident Indians (NRIs) can be attracted to visit agricultural farms to witness the rich culture of Punjab. Organic farming also can be promoted among progressive farmers. He further emphasized the increasing demand of organic products, for example, ‘*desi ghee*’ made from Sahiwal breed of cow.

Mushroom cultivation is an important enterprise for employment generation and plays a role in agro-waste management like paddy straw. Sh Amrit Pal Singh Bajwa, a progressive mushroom grower from Kurukshetra, is earning a net profit of INR 80,000/- from 60’x30’ mushroom shed. He gave detailed information about his ancestral mushroom farm. His mushroom establishment imparts training to SC/

ST farmers and rural youth in PPP mode with CCSHAU, Hisar. He is also providing employment to 35,000 man-days in a year through contract farming of mushroom in adjoining villages. He himself is a good example of great success through hard work. He is pursuing MBA along with his business.

Sh Jyoti Saroop, General Manager, Unnati Cooperative Marketing-cum-Processing Society stressed upon the characteristics of an entrepreneurs with 4Ps i.e. passion, positivity, patience and prayer. He appealed to the young agricultural professionals to imbibe these characteristics into them to become successful entrepreneurs. While giving details about Unnati model, he told that bioresources of *Kandi* region when processed scientifically helped them to raise the livelihood of poor people in this area. Unnati was formed in 2007 with the technical support of PAU, Ludhiana in developing this successful venture.

Sh Sukhwinder Singh from Kotli village of Ludhiana district is a progressive piggery farmer. He gave detailed information about his venture starting from 3 pigs only and made good progress. Subsequently, he developed a new breed of pig through imported semen.

Sh Parma Ram Chaudhary is a progressive farmer from Mandi, Himachal Pradesh who also shared his farming experiences. He owns only one hectare of land and is involved in mushroom cultivation. He started terrace farming of vegetables from spent compost used in mushroom cultivation and is now growing sizeable quantity of vegetables on his roof farm. His model is quite popular among farmers of nearby villages.

Sh Manmohan Singh Verka shared his experiences on kinnow cultivation. He is also a member of Research & Extension Council of PAU, Ludhiana. He urged the youth that this is high time to devise own expertise by getting trained in newer fields. He emphasized that hard work and dedicated efforts will ultimately result into success.

## **TECHNICAL SESSION-4: SCALING INNOVATIONS AND SUCCESSFUL BUSINESS MODEL**

**Chair** : Dr Bhag Mal, Senior Consultant, TAAS, New Delhi

**Co-Chair** : Dr DS Dahiya, DSW, HAU, Hisar

**Rapporteurs** : Dr Ramesh Kumar, Principal Scientist, ICAR-IIMR, Ludhiana  
Dr Pankaj Kumar, Assistant Professor, PAU, Ludhiana

In this session, the lead lecture was delivered by Sh Avtar Singh Dhindsa from Beauscape Farms, Langrian, Sangrur. He explained the success of his journey in the field of flower production. He told that just starting from 3.5 acres in 1985, he is

now exporting flower and vegetable seeds to Europe, USA, Japan, Korea, Taiwan, China and many other countries. He called upon the students not to be a “job seeker” but become “job provider”. He advocated that the passion and positive thinking are the first requirements for any enterprise and the scope of agriculture can never be faded as food is the primary requirement.

Sh Sarabjeet Singh from Dashmesh Mechanical Works Private Limited explained about his company and its six subsidiaries or sister concerns. He told about huge potential of farm mechanization as only 29-60 per cent mechanization is there at various levels of value chain. He also explained different challenges in the field of mechanization and stressed upon setting-up of Custom Hiring Centres.

Sh Karan Singh Thakur, a resident of Dharon Ki Dhar village near Solan, Himachal Pradesh presented the story of protected cultivation in his village and nearby areas. He started cultivation of carnation and 1,000 m<sup>2</sup> area under protected cultivation during 2011. A postgraduate in horticulture initially started his career as Research Fellow but left the job to take horticulture as a full time business. He is now earning about INR 40.0 lakh/annum from protected cultivation and sale of seedlings/plants from the nursery. He was conferred with ICAR’s Innovative Farmer Award in January 2020 for his outstanding work.

Sh HS Sidhu from Ludhiana presented a successful business model of machine banks for crop residue management. He talked about the work done by Gadri Baba Dulla Singh Giani Nihal Singh Foundation (GBDSGNSF) which is serving farmers for the last 12 years. The Foundation is educating farmers and offering them help at every level. They are working in a cluster of 45 villages. His foundation is emphasising on saving of natural resources and actively working in motivating farmers’ groups to practice resource conservation technologies; their sincere efforts resulted into converting 35 villages as residue burning free villages for which he has been awarded.

Sh Gowhar Ahmad Ganie from Kulgam district of J&K presented his model of Integrated Farming System. He has involved 1,250 farmers from 120 villages, who are benefitting by his model. He is practicing horticulture, fishery, poultry, nursery raising and earning more than INR 25.0 lakh/annum.

Sh Jatinder S. Chauhan from Bagi, Shimla presented the results of high density cultivation of apple for increasing farmers’ income. He has established “Singh Apple Orchard Organization (SAOO)” and got organic certification during 2013. He has trained about 10,000 farmers in the field of organic farming and high density planting of apple. He demonstrated how quality and quantity is improved in high density planting and also got benefitted through ease of operation, harvesting, etc.

Mrs Reena Chandel, a resident of Gagal village of Hamirpur, Himachal Pradesh shared her journey after taking training on fruit and vegetable processing under ARYA. She started with making papaya *burfi* and *laddoos*. A post-graduate in arts, who was earning INR 2,000-3,000/ month initially, now earns over INR 5 lakh/month from the sale of these products. She has made a Self-Help Group (SHG) of 20 ladies which is also engaged in processing of fruits and vegetables.

Ms Rekha Sharma is running a Self-Help Group (SHG) named “Sada Shiv Modern SHG” involving 350 families to her group and is earning more than INR 40 lakh/ annum and having outlets all over Punjab. She has been conferred with Smt Jagbir Kaur Award and State Award for her good quality products. She called upon the youth not to go abroad but to remain in India and contribute towards agriculture in the country itself.

Sh Simran Kang, a young entrepreneur from Bio Carve Seeds, elaborated activities of her company. Her company is exporting seed, cuttings and whole plants of 145 flowers and other seeds to 14 countries. The company is doing contract farming on 450 acres with 110 farmers and has the latest infrastructure like graders, solar power plant and drip irrigation at its field. She also explained the cost: benefit analysis of flower production as compared to wheat.

Sh Mohan from IFFCO gave an overview of his organization and mentioned about the fast growth of this organization from 57 cooperative societies in 1967 to 40,000 societies at present. This cooperative apart from production of fertilizers for the farmers providing INR 4,000/- bagged Sankat Haran Bima and also adopted villages to provide them subsidized seed of green manure crops.

During the discussion, Dr J Singh raised a query regarding how a young person can choose a particular enterprise. Sh Avtar Singh Dhindsa from Beauscape Farms, Langrian, Sangrur answered that always go for your passion and not after the scope. The students raised several queries about durability of polyhouse structure, guidelines for export business and marketing avenues for different fruit crops which were nicely answered by the speakers .

At the end, Dr DS Dahiya and Dr Bhag Mal while giving the concluding remarks highlighted the need for scaling innovations and adopting successful business models in order to motivate the youth to get engaged in agriculture. It was also emphasized that the youth (both men and women) should be proactive, receptive to newer technologies, and give greater thrust to value addition, product development and marketing to make agriculture more attractive and remunerative.

## **SESSION 5: PANEL DISCUSSION**

Moderator : Dr RS Paroda, Chairman, TAAS, New Delhi

Panellists : Dr BS Dhillon, Vice Chancellor, PAU, Ludhiana  
Dr RK Singh, Director, ICAR-CIPHET, Ludhiana  
Dr Sujay Rakshit, Director, ICAR-IIMR, Ludhiana  
Dr Baldev Singh, Chief Agricultural Officer, Moga  
Mr Praveen Bhatia, NABARD, Ludhiana  
Ms Reena Chandel, ARYA Entrepreneur, Hamirpur

Rapporteurs : Dr (Mrs) Ravinder Kaur Dhaliwal, DSW, PAU, Ludhiana  
Dr Rajesh K Rana, Principal Scientist, ICAR-ATARI, Ludhiana

The session started with the opening remarks by Dr RS Paroda on the overall purpose of the workshop. He emphasized that the youth should learn from the experiences of successful young entrepreneurs who have established world class business such as OYO Hotels as a source of motivation. Dr Paroda further stressed on the need for establishing INR10,000 crore Agri-Innovation Fund. Funding support could be extended by NABARD. Capital is one of the most critical factors in the process of establishment of new successful business hence, there is a need of extending credit facility free of interest to the young entrepreneurs during first 2-3 years. He further elaborated that KVK Agri-Clinics, nursery of vegetable plants, seed production, etc. are very good sources of motivating youth to remain in agriculture as these activities are both financially as well as intellectually satisfying to the youth. He further emphasised on the importance of thinking global and acting local for motivating youth in agriculture.

Culture of entrepreneurship development should be promoted in SAUs to the level of IITs and IIMs. Universities should think about providing internship to their students in collaboration with private industrial units. The tax implication of products made out of primary agricultural commodities are sometimes taxed which serves as a source of de-motivation to the young entrepreneurs. This issue should be resolved for promoting motivation of youth in agriculture. Dr Paroda informed the audience that the efforts made in India through the MAYA mission for producing desirable results have also been at international level.

Dr BS Dhillon informed that PAU, Ludhiana has been providing institutional support to young entrepreneurs, right from 1977 by mentoring and incentivising them. The University has not been charging anything for its own intellectual properties from the young entrepreneurs. He stated that the University is determined to increase the level of skill development/practical exercises in academics for promoting entrepreneurship. Skill Development Centre of PAU is promoting practical orientation

not only for University students but for outsiders too. Dr Dhillon explained that PAU has been encouraging the students to become mentors after attaining expertise and experience in their field. The Centre at the University is helping young entrepreneurs in making and improving their detailed project reports for establishing different types of businesses. Dr Dhillon further enlightened the house that PAU is constantly exploring possibilities for uniting youth with NABARD through various schemes. An award of INR 1.0 lakh was also provided to a teacher of Food Science and Technology for promoting scalable research issues in the University. He further emphasised that “Change is must but change is difficult”; however, significance of changing with the changing time in business is imperative. Further, he emphasised the need of private services including the paid services for specialized agri-business. He highlighted that girl students have been outperforming in terms of number as well as quality in the field of academics. However, this should be transformed into entrepreneurship development too.

Mr Praveen Bhatia from NABARD explained about various schemes and activities of NABARD for developing entrepreneurship throughout the country. Ms Reena Chandel, an ARYA entrepreneur from Himachal Pradesh, emphasized the need for institutional support for up-scaling their home scale processing through the development of processing unit by the group. The panel explored the possibilities and advised her to get connected with NABARD at district and state level.

Dr Baldev Singh stressed on developing entrepreneurial mind at young age so that the youth can keep on sharpening their abilities continuously. Dr Sujay Rakshit pointed out the chances of failure of professional qualification in the absence of adequate training. Dr RK Singh emphasized the scope for youth to convert unorganized food processing to organized food processing in India.

## **SESSION 6: PLENARY SESSION**

**Chair** : Dr RS Paroda, Chairman, TAAS, New Delhi

**Co-Chair** : Dr BS Dhillon, Vice Chancellor, PAU, Ludhiana

**Rapporteurs** : Er Gurpreet Virk, PAU, Ludhiana

Dr Rajesh K Rana, Principal Scientist, ICAR-ATARI, Ludhiana

In the plenary session, Dr RS Paroda mentioned about the objectives and outcome of the workshop. He emphasized that youths want to work with dignity and honour; therefore, we must give new dimension to agricultural profession. He stressed on the need for institutional support to the newly trained entrepreneurs in terms of finance, technical know-how and guidance in the form of professional hand holding. The role of mentorship in making successful entrepreneurs was also

duly emphasised. Dr Paroda further stated that youth is the future of our country and the maximum number of youth resides in India. With many options available in agriculture, there is a need to re-motivate the youth. Pointing out the gap in knowledge, he said young graduates can play a key role in educating the farmers regarding different aspects of agriculture. He also urged for not discouraging the farmers from farming and encouraging the youth to benefit from the opportunities available in agriculture. He opined that strong connect among planners-scientists-farm youth is urgently needed to implement schemes and programs which can be helpful in generating employment in agriculture.

Dr Paroda said that KVK Agri-Clinics, nursery of vegetable plants, seed production, etc. are very good sources of motivating youth to remain in agriculture. He further emphasized the need to work on the principle of “think globally and act locally” for motivating youth in agriculture. In his concluding remarks Dr Paroda advocated that the Universities, government and the private sector must act collectively to create an environment in which the youth are made aware, trained and facilitated to come forward with their entrepreneurial ideas.

Dr BS Dhillon, Vice Chancellor, PAU Ludhiana and Padma Shri Awardee, underlined the need for modifying, agricultural education system in order to promote the culture of innovation in agriculture and allied activities. The need of additional courses oriented to entrepreneurship development in PAU and other agricultural universities was also emphasised. Dr Dhillon, stressed on inculcating the importance of practical exposure in students along with the theoretical aspect of the study. He further emphasised upon developing entrepreneurial mind at young age so that the youth can keep on sharpening their abilities continuously.

Dr Dhillon further stated that agriculture offers enormous scope for employment generation and income enhancement and underlined the need for honouring the skills of the youth to enable them to become successful entrepreneurs and self-employed. He informed that this University is determined to increase the level of skill development/ practical exercises in academics for promoting entrepreneurship. Skill Development Centre of the this university is promoting practical orientation not only for PAU students but for outsiders too. He further explained that the university has been promoting the students to become mentors after attaining expertise and experience in their field. The Skill Development Centre is helping young entrepreneurs in making and improving their Detailed Project Reports for establishing businesses.

Dr (Mrs) Ravinder Kaur Dhaliwal, Students' Welfare Officer, PAU, Ludhiana and the Organising Secretary of the Regional Workshop on MAYA, proposed a vote of thanks to the Chief Guest, invited guests, dignatories, co-chairs, panelists,

rapporteurs, participants, students and the members of organising teams for making this workshop successful.

## **KEY RECOMMENDATIONS**

As a result of intense deliberations during the workshop, the following major recommendations emerged:

- Rural youths (both men and women) need vocational trainings in the potential areas like information communication technology (ICT), high value agriculture, processing, value addition, packaging, supply chain management, storage, etc. so that they can be motivated for entrepreneurship development. The well trained youth will be an asset to the society and can become active technology agent who can accelerate the process of technology diffusion.
- Youths in rural areas of India need to be empowered with knowledge and scaling-up their skills in priority areas like specialty agriculture, high-tech horticulture, protected cultivation, IPM/biocontrol, dairying, fisheries, beekeeping, community nursery, seed production, linking farmers with markets, etc. Well trained and competent youth will embrace agriculture if enabling policies for long-term investments, availability of easy and soft credit, provision of subsidy upfront to the entrepreneurs, farmer-farmer exchange visits and easy market accessibility, are in place.
- The custom hiring services for farm machinery is to be promoted on priority to promote the use of farm mechanization. “Farm-machines at door step” can be a successful model by involving youth. Accordingly, youth must be supported with technology and credit facilities to develop custom hiring centres.
- Venture capital/funds need to be created in the SAU’s to promote entrepreneurship among students. Provision of soft loans may also be made to help the students to become successful entrepreneurs.
- Agri-clinics need to be established on priority at block levels. The agriculture/veterinary graduates can run these agri-clinics and accordingly youth may be supported by knowledge based empowerment and financial provisions for bankable projects.
- Farmer Cooperatives, SHGs, Clubs and Farm Producer Organizations (FPOs) can play a vital role in dissemination of new technologies as a service window system and hence, can attract youth in agriculture. Therefore, at initial stage, the financial and infrastructural support to these organizations will give a boost in establishing service windows and provide employment to youth. Further, motivating young women in agriculture by empowering them with new

knowledge and technology will help a great deal. The SHGs, FPOs and other women organizations/societies also need to be encouraged and supported well to play an active role.

- Farms of the progressive and forward looking farmers, who have excelled in different enterprises, should be recognized as “Centres of Excellence” to facilitate the visit and training of youth for required confidence building so that they take risk while taking up their own enterprise in agriculture. For that, adequate fund needs to be made available.
- Agricultural graduates should be given specialized training linked with distribution of licenses for the sale of inputs, machinery and tools, as is being done in case of pharmacy. It will help in proper technology transfer on one hand and use of quality inputs for productivity enhancement on the other hand.
- Integrated Farming System (IFS), and emphasis on peri-urban farming, protected cultivation, especially, for export oriented crops, vegetables and flowers will encourage youth to adopt modern agriculture which will not only ensure economical empowerment but will also motivate for export oriented ventures.
- There is an urgent need to revise the curriculum of agricultural graduates with emphasis on skill development and entrepreneurship from initial years rather than in the final year. It should include project management, environmental analysis, report writing, etc.
- An appropriate mechanism needs to be developed for providing institutional support to promote entrepreneurship. Mentorship should be provided by a teacher and in return, the teacher may be paid some honorarium for his/her services.

## Technical Program

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Day 1: 28<sup>th</sup> February 2020 (Friday)

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08:30-09:30 Registration

09:30-09:55 Inauguration of Exhibition “ Potential Agri-enterprises”

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### INAUGURAL SESSION (09:55-11:20)

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09:55-10:00 Invocation & Lighting of the Lamp

10:00-10:05 About the Workshop Dr RK Dhaliwal, Director  
Students’ Welfare, PAU

10:05-10:15 Welcome and Introductory Remarks Dr BS Dhillon, Vice  
Chancellor, PAU, Ludhiana

10:15-10:25 Address by Special Guest Dr BS Sidhu, Commissioner  
of Agriculture

10:35-10:45 Address by Chief Guest Dr RS Paroda, Chairman,  
TAAS

10:55-11:05 Vote of Thanks Dr Rajbir Singh, Director,  
ICAR-ATARI, Ludhiana

11:05-11:10 National Anthem

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11:10-11:45 Tea/Coffee Break & Group Photograph

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### TECHNICAL SESSION - I (11:45-13:40)

#### Options for Retaining Youth in Agriculture

**Chair:** Dr Parvinder Kaushal, Vice Chancellor, YSPUH&F, Solan

**Co-Chair:** Dr Bhag Mal, Senior Consultant, TAAS

**Rapporteur:** Dr Manmeet Kaur, Associate Prof, PAU, Ludhiana & Dr Lopamudra Mohapatra, Assistant Prof, PAU, Ludhiana

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**Lead paper 1:** Value chain management in corn Sh Kawal Singh Chauhan  
11:45-12:05 (Padam Shri Awardee)  
Aterna, Sonipat

**Lead paper 2:** Exploiting potential of rural youth Dr Samunder Singh, former  
12:05-12:25 in agriculture Head, Department of  
Agronomy, CCSHAU

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12:25-12:40	Empowering agri-students : Some innovative ways	Dr DS Dahiya, Director Students' Welfare, CCSHAU, Hisar
12:40-12:55	Spurring entrepreneurship: Sowing the seed for bright future	Dr Vishal Bector, Associate Professor, PAU
12:55-13:10	Key learnings from ARYA - Pathway of rural prosperity	Dr Rajbir Singh, Director, ICAR-ATARI, Ludhiana
13:10-13:25	Opportunities for youth in agriculture	Dr S Kapoor, former Head, Department of Business Management & Comptroller, PAU, Ludhiana

13:25-13:40 Discussion

13:40-14:40 Lunch Break

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### TECHNICAL SESSION -II (14:40 - 16:25)

#### Initiatives on Youth Empowerment in Northern Region

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**Chair:** Dr NS Bains, Director of Research, PAU

**Co-Chair:** Dr Ashwani Kumar, former Director, ICAR-IIWM, Bhubaneswar

**Rapporteur:** Dr Dharminder Singh, Associate Prof & Dr Lopamudra Mohapatra, Assistant Prof, PAU, Ludhiana

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<b>Lead Paper 1:</b> 14:40-15:00	Scope of Post harvest management of agri-produce in employment generation	Dr RK Singh, Director, ICAR-CIPHET, Ludhiana
<b>Lead Paper 2:</b> 15:00-15:20	Shifting cafeteria agriculture to resource efficient agri-business for meeting aspirations of rural youth	Dr Jai Singh, former Director, ICAR-CIPHET, Ludhiana

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15:20-15:30	Role of ASCI in shaping youth empowerment	Mr Kamal Sodhi, Regional Manager(North), ASCI
15:30-15:40	CGAIR perspective for youth in agriculture	Dr. HS Sidhu, BISA
15:40-15:50	Linking farmers to emerging markets: Case study of RSD Model	Dr HS Dhaliwal, Director, PAMETI, Ludhiana
15:50-16:00	Congenial policy environment for aspiring entrepreneurs	Sh Parveen Bhatia, NABARD
16:00-16:10	Digital solutions for innovative agriculture & marketing	Mr Hunar Brar, CEO, Cogneesol AgTech Pvt Ltd
16:10-16:15	Experiences of YPRAD in India	Ms Sarvjeet Kaur, YPRAD

16:15-16:25 Discussion

16:25-16:35 Tea break

**TECHNICAL SESSION - III (16:35 - 19:05)**

**Innovative Agripreneurship- Farmers' Experiences**

**Chair:** Dr Jai Singh, Former Director, ICAR-CIPHET, Ludhiana

**Co-Chair:** Dr RK Singh, Director, ICAR-CIPHET, Ludhiana

**Rapporteur:** Dr Sandeep Mann, Principal Scientist, CIPHET & Dr Renu Balakrishnan, Scientist, CIPHET

**Lead paper 2:** Harnessing potentials of fishery for employment and income generation  
 16:55-17:15 Sh Sultan Singh (Padam Shree Awardee) Butana, Karnal

17:35-17:50 Agro-tourism: An attractive start-up venture  
 Sh Vishavjit Jyani, Jyani Natural Farm, Kettera, Fazilka

17:50-18:05 Value chain management in mushroom  
 Amrit Pal Singh, Bajwa Mushroom Farm, Kurukshetra

18:05-18:20 Pathway of prosperity through agro-processing: A case study of Unnati Cooperative  
 Sh Jyoti Saroop, General Manager, Unnati Cooperative Marketing-cum-Processing Soc Ltd, Talwara

18:20-18:35 Pig farming: High value enterprise for income & employment generation  
 Sh Sukhwinder Singh Kotli, Ludhiana

18:35-18:50 Terrace farming: Innovative way of vegetable cultivation  
 Sh Parma Ram Chaudhary, Chhattar, Mandi, HP  
 Kinnow Cultivation  
 Sh Manmohan Singh, Verka, Chief Minister Awardee

18:50-19:05 Discussion

19:05-20:00 Cultural evening

20:00 Dinner

**Day 2: 29<sup>th</sup> February 2020 (Saturday)**

**TECHNICAL SESSION-IV (09:00 - 12:05)**

**Scaling Innovations and Successful Business Models**

**Chairs:** Dr Bhag Mal, Senior Consultant, TAAS

**Co-chair:** Dr DS Dahiya, Director Students' Welfare, CCSHAU, Hisar

**Rapporteur:** Dr Ramesh Kumar, Principal Scientist, ICAR-IIMR, Ludhiana & Dr Pankaj, Assistant Prof, PAU, Ludhiana

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<b>Lead paper:</b> 09:00-09:20	Floriculture: Journey from field to export	Sh Avtar Singh Dhindsa, Beauscape Farms, Langrian, Sangrur
09:20-09:35	Prospects of seed chain in employment generation	Sh Simran Rang (National Awardee), Head, Business Development, Biocarve Seeds, Patiala
09:35-09:50	Value chain - Farm mechanization	Sh Sarbjit Singh, Dashmesh Mechanical Works, Ludhiana
09:50-10:05	Successful business model of machine banks for residue management	Sh HS Sidhu, Jalal diwal, Raikot
10:05-10:20	Protected cultivation	Sh Karan Singh Thakur, Dharon Ki Dhar, Solan, HP
10:20-10:35	Integrating farming system for higher income	Sh Gowhar Ahmed Ganie, Bogound, Kulgam, J&K
10:35-10:50	High density cultivation of apple for doubling farmer income	Sh Jitender Chauhan, Baghi, Shimla, HP
10:50-11:05	Serving healthy processed food to earn attractive livelihood for the community	Ms Reena Chandel, Hamirpur, HP
11:05-11:20	Creating successful employment for families through processing of organic food	Ms Rekha Sharma, District Hoshiarpur
11:35-11:50	IFFCO in the services of youth	Mr Mohan, IIFCO
11:50-12:05	Discussion	
<b>12:05-12:20</b>	<b>Tea break</b>	

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#### **TECHNICAL SESSION-V (12:20 - 14:00)**

#### **Panel Discussion: Enabling Environment for Enhancing Entrepreneurship**

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**Moderator:** Dr RS Paroda, Chairman TASS

**Panelists:** Dr Baldev Singh Dhillon, Vice Chancellor, PAU, Ludhiana  
Dr Sujoy Rakshit, Director, ICAR- IIMR, Ludhiana  
Dr R K Singh, Director, ICAR-CIPHET, Ludhiana

Dr Baldev Singh, Chief Agricultural Officer, Moga

Ms. Reena Chandel, Hamirpur, HP

Shri Parveen Bhatia, NABARD

**Rapporteur:** Dr (Mrs) RK Dhaliwal, Director Students' Welfare & Dr RK Rana,  
Principal Scientist, ICAR-ATARI, Ludhiana

**14:00-15:00 Lunch**

**PLENARY SESSION (15:00 - 16:30)**

**Chair:** Dr RS Paroda, Chairman, TAAS

**Co-chair:** Dr BS Dhillon, Vice Chancellor, PAU,  
Ludhiana

15:00-15:20 Conclusions and recommendations Rapporteurs of the session

15:20-15:40 General Feedback Participants

15:40-16:20 Concluding Remarks Dr RS Paroda and Dr BS  
Dhillon

16:20-16:30 Vote of Thanks Dr (Mrs) RK Dhaliwal

**16:30 Tea**

## List of Participants

1	Dr RS Paroda Chairman, TAAS	20	Mr Hunar Brar, CEO, Cogneesol AgTech Pvt Ltd
2	Dr BS Dhillon Vice Chancellor, PAU, Ludhiana	21	Ms Sarvjeet Kaur YPRAD
3	Dr BS Sidhu Commissioner of Agriculture	22	Sh Sultan Singh (Padam Shri Awardee) Progressive Farmer, Butana, Karnal
4	Dr Rajbir Singh Director, ICAR-ATARI, Ludhiana	23	Sh Vishavjit Jyani Progressive Farmer, Jyani Natural Farm, Ketera, Fazilka
5	Dr RK Dhaliwal Director Students' Welfare, PAU	24	Amrit Pal Singh Progressive Farmer, Bajwa Mushroom Farm, Kurukshetra
6	Dr Bhag Mal Senior Consultant, TAAS	25	Sh Jyoti Saroop Unnati Cooperative Marketing- cum-Processing Soc Ltd, Talwara
7	Dr Sujoy Rakshit Director, ICAR- IIMR, Ludhiana	26	Sh Sukhwinder Singh Kotli Ludhiana
8	Dr Baldev Singh Chief Agricultural Officer, Moga	27	Sh Parma Ram Chaudhary Progressive Farmer, Chhattar, Mandi, HP
9	Sh Kawal Singh Chauhan (Padam Shri Awardee)Aterna, Sonipat	28	Sh Manmohan Singh Progressive Farmer, village Verka, Amritsar
10	Dr Samunder Singh CCSHAU	29	Sh Simran Rang (National Awardee) Head, Business Development, Biocarve Seeds, Patiala
11	Dr DS Dahiya Director Student Welfare, CCSHAU, Hisar	30	Sh Sarbjit Singh Dashmesh Mechanical Works, Ludhiana
12	Dr Vishal Bector Associate Professor, PAU	31	Sh HS Sidhu Progressive Farmer, Jalal diwal, Raikot

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| <p>13 Dr S Kapoor<br/>Former Head, Department<br/>of Business Management &amp;<br/>Comptroller, PAU, Ludhiana</p> <p>14 Dr RK Singh<br/>Director, ICAR-CIPHET,<br/>Ludhiana</p> <p>15 Dr Jai Singh<br/>Former Director, ICAR-<br/>CIPHET, Ludhiana</p> <p>16 Mr Kamal Sodhi<br/>Regional Manager(North),<br/>ASCI</p> <p>17 Dr HS Sidhu<br/>BISA</p> <p>18 Dr HS Dhaliwal<br/>Director, PAMETI, Ludhiana</p> <p>19 Sh Parveen Bhatia<br/>NABARD</p> | <p>32 Sh Karan Singh Thakur<br/>Progressive Farmer, Solan, HP</p> <p>33 Sh Gowhar Ahmed Ganie<br/>Progressive Farmer, Bogound,<br/>Kulgam, J&amp;K</p> <p>34 Sh Jitender Chauhan<br/>Progressive Farmer, Baghi,<br/>Shimla, HP</p> <p>35 Ms Reena Chandel<br/>Progressive Farmer, Hamirpur,<br/>HP</p> <p>36 Ms Rekha Sharma<br/>Progressive Farmer, Hoshiarpur</p> <p>37 Mr Mohan<br/>Progressive Farmer, IFFCO</p> |
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**Dr YS Parmar University of Horticulture and Forestry, Solan**

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| <p>38. Dr NS Thakur<br/>Principal Extension Specialist</p> <p>39. Dr SR Dhiman<br/>Principal Scientist</p> <p>40. Dr HK Sharma<br/>Principal Scientist</p> <p>41. Dr Kuldeep Thakur<br/>Principal Scientist</p> <p>42. Dr Naveen Sharma<br/>Assistant Professor</p> <p>43. Dr Dharmesh Gupta<br/>Principal Scientist</p> <p>44. Abhishek Bhat<br/>B.Sc. Student</p> <p>45. Abhishek Dhanta<br/>B.Sc. Student</p> <p>46. Gulshan Birsanta<br/>B.Sc. Student</p> | <p>48. Ronin Bhandari<br/>B.Sc. Student</p> <p>49. Sahil Thakur<br/>B.Sc. Student</p> <p>50. Vikas Sharma<br/>B.Sc. Student</p> <p>51. Diksha Dhiman<br/>B.Sc. Student</p> <p>52. Hemlata Kaushal<br/>B.Sc. Student</p> <p>53. Shivali Sharma<br/>B.Sc. Student</p> <p>54. Vasundhra Negi<br/>B.Sc. Student</p> <p>55. Pratyush Chauhan<br/>B.Sc. Student</p> <p>56. Nikhil Thakur<br/>B.Sc. Student</p> |
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47. Ikshit Thakur  
B.Sc. Student

**Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu**

57. Dr AK Pathak  
Assistant Professor

61. Mr Rizwan Yousuf

58. Dr Nazam Khan  
Assistant Professor

62. Ms Anna Singh

59. Dr Gurdev Chand  
Assistant Professor

63. Ms Komal Chouhan

60. Mr Sutikshan Sharma

**Sher-e-Kashmir University of Agricultural Sciences and Technology, Kashmir**

64. Prof TH Masoodi  
Dean, Faculty of Forestry

72. Dr Bilal Ahmad Langoo  
Assistant Prof, College of Agril  
Engg, & Tech, Shalimar

65. Dr Ab Hai  
Professor-cum-Chief Scientist

73. Dr Zahoor Ahmad Bhat  
Asstt Prof, Division of  
Floriculture

66. Dr Khalid Mushtaq  
Professor & Head

74. Dr Firdous Ahmad Malik  
Assistant Prof, College of  
Temperate Sericulture, Mirgund

67. Dr Farhat A. Shaheen  
Associate Professor

75. Dr Amir Hassan Mir  
Assistant Prof, Division of Soil  
Science, FoA, Wadura

68. Dr Farah Naz Rasool  
Deputy Director (Trainings)

76. Ahmer Bashir Shah  
M.Tech Student

69. Dr Seema Lohani  
Students' Welfare Officer

77. Muzamil Hamid Wani  
M.Tech Student

70. Dr Rizwana Malik  
Assistant Professor

78. Lubna Altaf  
M.Sc. Student

71. Dr Farahanaz Rasool  
Deputy Director Extension

79. Burjis Bhat  
M.Sc. Student

**Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut**

80. Dr LB Singh  
Professor

82. Ms Dimpal Kaparwal  
Ph.D Scholar

81. Dr Veer Pal Kaparwal  
Assistant Professor

83. Ms Akanksha Singh  
Ph.D Scholar

**GB Pant University of Agriculture and Technology, Pantnagar, Uttarakand**

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|-----|---|-----|-------------------------------------|
| 84. | Dr. Neelam Bhardwaj<br>Professor, GBPUA&T,<br>Pantnagar | 89. | Ms Sonal Pathak<br>M.Sc. Student    |
| 85. | Dr Anjali Chunera<br>PDF, IDP-NAHEP                     | 90. | Ms Sakshi Bhatt<br>M.Sc. Student    |
| 86. | Dr Divya Yadav<br>E-Content Developer, IDP-<br>NAHEP    | 91. | Ms Vishaka Sawan<br>M.Sc. Student   |
| 87. | Ms Pragya Goswamy<br>Ph.D Scholar                       | 92. | Ms N. Anusha Reddy<br>M.Sc. Student |
| 88. | Ms Usha Das<br>Ph.D Scholar                             | 93. | Ms Kanika Pandey<br>M.Sc. Student   |

**Indian Agricultural Research Institute, Pusa Campus, New Delhi**

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|-----|--|------|-------------------------------------|
| 94. | Dr P. Anbukkani<br>Division of Agricultural<br>Economics, IARI | 99.  | Mr Harish H<br>Ph.D. Scholar        |
| 95. | Mr Ankit Mahapatra<br>M.Sc. Student                            | 100. | Ms Usha Kumari<br>Ph.D. Scholar     |
| 96. | Mr Harish M N<br>Ph.D. Scholar                                 | 101. | Ms Asha Rani Patel<br>Ph.D. Scholar |
| 97. | Mr Durgasi Venkata Bhargav<br>Ph.D. Scholar                    | 102. | Mr Gagandeep Singh<br>M.Sc. Student |
| 98. | Mr Rakshith HS<br>Ph.D. Scholar                                | 103. | Mr Pulkit Chawla<br>M.Sc. Student   |

**Chaudhary Charan Singh Haryana Agricultural University, Hisar**

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|------|--------------------------------------|------|-------------------------|
| 104. | Ankit Yadav<br>B.Sc. Student         | 119. | Monika<br>B.Sc. Student |
| 105. | Tariq Mushtaq Malik<br>B.Sc. Student | 120. | Muskan<br>B.Sc. Student |
| 106. | Chetan<br>B.Sc. Student              | 121. | Pooja<br>B.Sc. Student  |
| 107. | Basant<br>B.Sc. Student              | 122. | Ritika<br>B.Sc. Student |
| 108. | Abhilekh<br>B.Sc. Student            | 123. | Simran<br>B.Sc. Student |
| 109. | Abhishek<br>B.Sc. Student            | 124. | Tinnu<br>B.Sc. Student  |

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|------|-----------------------------------|------|---------------------------|
| 110. | Ajay<br>B.Sc. Student             | 125. | Rajiv<br>B.Sc. Student    |
| 111. | Anaam<br>B.Sc. Student            | 126. | Ravinder<br>B.Sc. Student |
| 112. | Aryan<br>B.Sc. Student            | 127. | Sahil<br>B.Sc. Student    |
| 113. | Bheem Singh<br>B.Sc. Student      | 128. | Suman<br>B.Sc. Student    |
| 114. | Keshav<br>B.Sc. Student           | 129. | Jyoti<br>B.Sc. Student    |
| 115. | Mohit<br>B.Sc. Student            | 130. | Kajal<br>B.Sc. Student    |
| 116. | Mosim<br>B.Sc. Student            | 131. | Komal<br>B.Sc. Student    |
| 117. | Nilanchal Nishan<br>B.Sc. Student | 132. | Mamta<br>B.Sc. Student    |
| 118. | Rajat<br>B.Sc. Student            |      |                           |

**Punjab Agricultural University, Ludhiana**

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|------|---|------|----------------------------------|
| 133. | Dr (Mrs) Asha Chawla<br>Principal Scientist                       | 170. | Muskan<br>M.Sc. Student          |
| 134. | Dr Kamal Preet Kaur<br>Assistant Prof PAU                         | 171. | Kajal Samyal<br>B.Sc. Student    |
| 135. | Dr. Sukhmani<br>Assistant Prof., PAU                              | 172. | Neha Josh<br>Ph.D. Scholar       |
| 136. | Dr. Monika Gupta<br>Department of Fruit Science                   | 173. | Shatakshi Singh<br>M.Sc. Student |
| 137. | Dr. Sapna Thakur<br>Department of Forestry &<br>Natural Resources | 174. | Anjana Rai<br>Ph.D. Scholar      |
| 138. | Davinder Singh<br>M.Sc. Student                                   | 175. | Jasbir Kaur<br>M.Sc. Student     |
| 139. | Gurbhej Singh Sran<br>B.Sc. Student                               | 176. | Sonia<br>M.Sc. Student           |
| 140. | Arshdeep Singh<br>B.Sc. Student                                   | 177. | Livleen Kaur<br>B.Sc. Student    |
| 141. | Harvinder Singh Tiwana<br>B.Sc. Student                           | 178. | Harsimran Kaur<br>B.Sc. Student  |

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| 142. | Navjot Singh<br>B.Sc. Student                 | 179. | Arshdeep Kaur<br>M.Sc. Student      |
| 143. | Gurpreet Singh<br>B.Sc. Student               | 180. | Ankita<br>M.Sc. Student             |
| 144. | Navneet Singh Saini<br>B.Sc. Student          | 181. | Ramandeep Kaur<br>M.Sc. Student     |
| 145. | Rajneesh Chaudhary<br>B.Sc. Student           | 182. | Raziya Banoo<br>M.Sc. Student       |
| 146. | Maninder Singh<br>B.Sc. Student               | 183. | Aeshna Sinha<br>Ph.D. Scholar       |
| 147. | Anil Kumar<br>M.Sc. Student                   | 184. | K Asani Anis<br>M.Sc. Student       |
| 148. | Mr Jaideep<br>Ph.D. Scholar                   | 185. | Nishtha Vashishtha<br>Ph.D. Scholar |
| 149. | Mr Parveen<br>Ph.D. Scholar                   | 186. | Kasish Verma<br>B.Sc. Student       |
| 150. | Er Ajaib Singh<br>Ph.D. Scholar               | 187. | Alpna<br>B.Sc. Student              |
| 151. | Mr Ashish Sood<br>M.Tech Student              | 188. | Jaismeen Sidhu<br>B.Sc. Student     |
| 152. | Gurpreet Jhally<br>M.Tech Student             | 189. | Deepanshi<br>B.Sc. Student          |
| 153. | Londhe Akshay Ankush<br>M.Tech Student        | 190. | Divyata Joshi<br>Ph.D. Scholar      |
| 154. | K Anupam Swain<br>M.Tech Student              | 191. | Anusha Awasthi<br>M.Tech Student    |
| 155. | Saurabh Bassi<br>M.Tech Student               | 192. | Ishwinder Kaur<br>M.Tech Student    |
| 156. | Abrar Yousuf<br>Ph.D. Scholar                 | 193. | Ishwinder Kaur<br>M.Tech Student    |
| 157. | Gursharan Deep Singh Hansra<br>M.Tech Student | 194. | Pawandeep Kaur<br>M.Tech Student    |
| 158. | Komalpreet Singh<br>M.Tech Student            | 195. | Ayushi Jha<br>M.Tech Student        |
| 159. | Manavjot Singh<br>M.Tech Student              | 196. | Shaina Jain<br>Ph.D. Scholar        |
| 160. | Akshay F Madiwalar<br>M.Sc. Student           | 197. | Anchal Gupta<br>Ph.D. Scholar       |

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| 161. | Ayush Kachru Lal Sharma<br>M.Sc. Student | 198. | Roohi<br>Ph.D. Scholar          |
| 162. | Karthik KP<br>M.Sc. Student              | 199. | Alisha Chauhan<br>Ph.D. Scholar |
| 163. | Karmvir Singh Garcha<br>Ph.D. Scholar    | 200. | Jyoti Verma<br>Ph.D. Scholar    |
| 164. | Debaraj Barman<br>Ph.D. Scholar          | 201. | Harneet Kaur<br>B.Sc. Student   |
| 165. | Tejpal Singh Sran<br>Ph.D. Scholar       | 202. | Palak Bansal<br>M.Sc. Student   |
| 166. | Sushil Kumar<br>Ph.D. Scholar            | 203. | Parul Sood<br>M.Sc. Student     |
| 167. | Khushpreet<br>B.Sc. Student              | 204. | Tanya<br>B.Sc. Student          |
| 168. | Gurkirat<br>B.Sc. Student                | 205. | Sakshi Singla<br>M.Sc. Student  |
| 169. | Vishu Kakria<br>B.Sc. Student            |      |                                 |

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| 206. | Dr Prahalad Singh Tanwar<br>Associate Director       | 231. | Mohit Kamboj<br>B.Sc. Student          |
| 207. | Dr Suryendra Singh<br>Assistant Professor (Agronomy) | 232. | Sunwinder Singh<br>B.Sc. Student       |
| 208. | Dr Anjuly Sharma<br>Assistant Professor              | 233. | Akhil Sharma<br>B.Sc. Student          |
| 209. | Dr Paramjit Kaur<br>Associate Professor              | 234. | Anmol Singh Gill<br>B.Sc. Student      |
| 210. | Dr Jyoti<br>Assistant Professor                      | 235. | Hassandeep Singh Sohi<br>M.Sc. Student |
| 211. | Dr Daljeet Kaur<br>Assistant Professor               | 236. | Sylvia Lalhmingmawii<br>M.Sc. Student  |
| 212. | Dr O. P. Malav<br>Assistant Professor                | 237. | Harpreet Kaur                          |
| 213. | Dr Sidhartha Deshmukh<br>Assistant Professor         | 238. | Parminder Kaur<br>Ph.D. Scholar        |
| 214. | Dr L. Geeta Devi<br>Assistant Professor              | 239. | Prakriti Sharma<br>Ph.D. Scholar       |

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| 215. | Dr Satparkash Singh<br>Assistant Professor        | 240. | Srishti Prashar<br>Ph.D. Scholar     |
| 216. | Dr BV Sunil Kumar<br>Assistant Professor          | 241. | Manpreet Kaur<br>B.Sc. Student       |
| 217. | Dr Davneet Kaur<br>Teaching Fellow                | 242. | Navneet Kaur<br>B.Sc. Student        |
| 218. | Dr Yashwant Singh<br>Deputy Director (Training)   | 243. | Simran Kaur<br>B.Sc. Student         |
| 219. | Dr Munish Sharma<br>Assistant Professor           | 244. | Manpreet Kaur<br>B.Sc. Student       |
| 220. | Dr Parul Gupta<br>Assistant Professor             | 245. | Anupriya<br>B.Sc. Student            |
| 221. | Dr Prabjeet Singh<br>Assistant Professor          | 246. | Tanya Gupta<br>B.Sc. Student         |
| 222. | Dr Sumanpreet Kaur<br>Veterinary Officer          | 247. | Dr Radhika Sharma<br>Ph.D. Scholar   |
| 223. | Dr Ajaybir Singh Dhaliwal<br>Veterinary Officer   | 248. | Dr Parteek Dhaliwal<br>Ph.D. Scholar |
| 224. | Dr Ramandeep Kaur Dhaliwal<br>Assistant Professor | 249. | Manpreet Singh<br>Ph.D. Scholar      |
| 225. | Tejas Shende<br>Ph.D. Scholar                     | 250. | Kanwaljit Rana<br>Ph.D. Scholar      |
| 226. | Bipanreet Singh<br>M.Sc. Student                  | 251. | Kanwar Pal<br>M.Sc. Student          |
| 227. | Dr Navrose Sangha<br>Ph.D. Scholar                | 252. | Anuj Lal<br>B.Sc. Student            |
| 228. | Dr Vikas Jaiswal<br>Ph.D. Scholar                 | 253. | Sanjeev Digra<br>B.Sc. Student       |
| 229. | Dr Devendra Saran<br>Ph.D. Scholar                | 254. | Taranpreet Singh<br>B.Sc. Student    |
| 230. | Harshdeep Singh<br>B.Sc. Student                  | 255. | Tarunpreet<br>B.Sc. Student          |

**Progressive Farmers**

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|------|-------------------------------|------|-----------------------------|
| 256. | Saurabh Saini<br>KVK Haridwar | 283. | Ajay Singh<br>KVK Rauni     |
| 257. | Nitin Kumar<br>KVK Hoshiarpur | 284. | Joginder Kumar<br>KVK Rauni |

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|------|---------------------------------|------|---|
| 258. | Mohit Choudhary<br>KVK Haridwar | 285. | Mustaq Ahmad<br>KVK Rauni                       |
| 259. | Jitendar Chauhan<br>KVK Shimla  | 286. | Sushant Sharma<br>KVK Rauni                     |
| 260. | Joginder Singh<br>KVK Rohru     | 287. | Sandoor Kumar<br>KVK Rauni                      |
| 261. | Rahul<br>KVK Haridwar           | 288. | Sushant Sharma<br>KVK Kathua                    |
| 262. | Anureet<br>Muzaffarnagar        | 289. | Parveen Singh<br>KVK Kathua                     |
| 263. | Madan Pal<br>Muzaffarnagar      | 290. | Karan Lal<br>KVK Kathua                         |
| 264. | Balpreetsingh<br>KVK Bathinda   | 291. | Muy Manmolaus<br>KVK Kathua                     |
| 265. | Amandeep Singh<br>KVK Bathinda  | 292. | Karan Singh<br>KVK Kandaghat, Solan             |
| 266. | Baljeet Kaur<br>KVK Bathinda    | 293. | Subhash Chand<br>KVK Kandaghat, Solan           |
| 267. | Jaspreet Kaur<br>KVK Bathinda   | 294. | Parmanand<br>KVK Kandaghat, Solan               |
| 268. | Bipan<br>Palampur               | 295. | Surinder Singh<br>KVK Kandaghat, Solan          |
| 269. | Rameshwar<br>KVK Kanglathad     | 296. | Sukhwinder Singh Grewal<br>KVK Kandaghat, Solan |
| 270. | Inder Singh<br>KVK Kanglathad   | 297. | Sultan Singh<br>Nilokheri                       |
| 270. | Ravi Sharma<br>KVK Kanglathad   | 298. | Ramesh Chand<br>Nilokheri                       |
| 272. | Baljeet Kaur<br>KVK Bathinda    | 298. | Sarabjeetsingh<br>Progressive Farmer            |
| 273. | Vikram Singh<br>Palampur        | 300. | Shalinder Singh<br>KVK Bathinda                 |
| 274. | Taranvir Singh<br>KVK Samrala   | 301. | Surjit Kumar<br>Progressive Farmer              |
| 275. | Ranjeet Singh<br>KVK Samrala    | 302. | Ram Dass<br>KVK Patiala                         |
| 276. | Gurdeep Singh<br>KVK Samrala    | 303. | Arshdeep Singh<br>KVK Sirhind                   |

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| 277. | Manjinder Singh<br>KVK Samrala      | 304. | Malkit Singh<br>KVK Patiala           |
| 278. | Jaspreet Kaur<br>KVK Bathinda       | 305. | Arshdeep Singh<br>KVK Fatehgarh Sahib |
| 279. | Ram Singh<br>Progressive Farmer     | 306. | Hardeep Singh<br>KVK Handiaya         |
| 280. | Poonam Thakur<br>Progressive Farmer | 307. | Mehtab Singh<br>KVK Handiaya          |
| 281. | Ram<br>Progressive Farmer           | 308. | Kulwinder Singh<br>KVK Handiaya       |
| 282. | Gurpreet Singh<br>KVK Handiaya      |      |                                       |
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# Exhibition of Potential Agri-enterprises

