



**Regional Workshop on
Kaushal Vikas Se Krishi Vikas (Skill Development in Agriculture)
15th September, 2017
Chandigarh (Punjab), India**



The Ministry of Agriculture & Farmers' Welfare, Govt. of India organised a regional workshop 'Skill Development in Agriculture' on thematic area 'Kaushal Vikas Se Krishi Vikas' in collaboration with the Department of Agriculture and Horticulture, Government of Haryana on September 15th, 2017 at Chandigarh. Dr. B.P. Singh reflects on his participation at this event.

CONTEXT

In India, 263 million people are engaged in the agriculture sector and over half of them are agricultural labourers (Census, 2011). In comparison to the 2001 census, there has been a 44 per cent increase in the male population of agricultural labourers. The number of female agricultural labourers has increased by 24.5 per cent, while the number of farmers has decreased by 8.6 million as per the 2011 census.



Further, with the increase in population, the demand for food and agricultural produce, particularly processed, high-quality and nutritive foods have been increasing. However, the supply of such food is not matching the growing demand due to low productivity owing to improper farm management practices and loss in post-harvest handling which requires specific sets of skills. To tackle this situation, the ASCI is working on building the capacity in

agricultural sector and bridging the gap between laboratories and farms by creating a sustainable ecosystem for skill and entrepreneurship development with the following objectives:

- Determining skills/competency standards and qualifications and development of National Occupational Standards (NOS)
- Preparation and maintenance of skill inventory to facilitate individual choices
- Development of sector-specific skill development plans
- Standardisation of affiliation and accreditation process
- Affiliation, accreditation, assessment and certification of vocational institutes/programmes
- Planning and execution Training of Trainers (ToT)
- Promotion of academics of excellence
- Establishment of a well-structured, sector-specific, Labour Market Information System (LMIS) to assist planning and delivery of training
- Adoption of global best practices

To achieve all these objectives, the ASCI has been organizing workshops, in association with Ministry of Agriculture & Farmers' Welfare, Government of India, in different regions of the country and this workshop was for the states of Northern Region. In this workshop, the Heads of Agriculture Department of each state presented the current status of agriculture sector including availability, gap and requirement of skilled manpower, besides work progress of Skill Development Council in their respective states (except the Head of Agriculture Department, Uttar Pradesh).

The key objective of this workshop was to outline the roadmap and guidelines for skill development in agriculture and its subsequent adoption by Agriculture Skill Council of India (ASCI). Higher officials from Dept. of Agriculture and Horticulture, National Institute of Agricultural Extension Management (MANAGE), State Agricultural Universities (SAUs), ICAR institutes and Krishi Vigyan Kendras participated in the workshop along with representative of agripreneur, progressive farmers and innovators from Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand and Uttar Pradesh.

PROGRAMME

Inaugural Session

The programme started with welcome address by Dr. Arjun Singh Saini, Director General (Horticulture), Government of Haryana. The workshop was inaugurated by Hon'ble Sh. Om Prakash Dhankar, the Minister of Agriculture & Farmer Welfare, Govt. of Haryana, who stressed on the wide scope of soft and hard skill learning in agricultural enterprises with its utmost importance in processing, packaging, marketing in addition to the production itself. He emphasised that skill learning should be incorporated in the

educational curriculum of schools and colleges so that the students would be emerge with the set of skills required for employment. He also appreciated the efforts made by the Haryana State Skill Council through which a band of skilled youth are practicing good agriculture practices and marketing their farm produces in Delhi.

Shri Amitabh Gautam, Joint Secretary (Extension), The Ministry of Agriculture & Farmers' Welfare, Govt. of India, remarked that the government was focusing on skill development among the rural youth who lack information about the opportunities available in the areas of skill development following the recent initiatives undertaken by the Indian government. He informed that 66 qualifications had been identified for the skill development programme by ASCI under which 100 KVKs and 8 DAC centres were selected during 2016-17 and 337 youth trained. Further, he added that the Ministry had selected 997 training centres in 2017-18 for skill development trainings to 19,580 youths across the country so as to double their income by 2022.

Dr K.P. Singh, Vice-Chancellor of Haryana Agriculture University, Hisar, appreciated the formation of the separate Ministry of Skill Development & Entrepreneurship by the Govt. of India. He opined that maximum development in agricultural sector took place in Haryana and Punjab states due to the adoption of recommended technologies and practices of SAUs. He also added that HAU, Hisar, had launched a certificate course for the skill development of the Panchayat department in collaboration with Non-Government Organisations (NGOs).

Dr. B.S. Dhillon, Vice-Chancellor of Punjab Agricultural University, Ludhiana, emphasised that skill development in agro-processing is a crucial area. Farmers and youth need to be skilled in application of seed rate, fertilisers, insecticide, pesticides, bee-keeping, mushroom, cookery, financial managements, management of crop production data etc. The inaugural session was concluded with the vote of thanks by Sh. S.K. Behera, Special Secretary, Agriculture and Farmers' Welfare Department, Govt. of Haryana.

Overview of the technical sessions

Technical Session-I: Skill Development Ecosystem at the National Level

In this session, chaired by Shri. Amitabh Gautam, the following three presentations were made:

Dr. Satendar Arya, CEO, ASCI, made a presentation on 'Role of Agriculture Skill Council of India (ASCI) in Skill Development in Agriculture'. He highlighted that in India only 4.69% of the labour workforce had undergone formal skills training as compared to 52% in USA, 68% in UK, 75% in Germany, 80% in Japan, and 96% in South Korea. Further, he highlighted that in the agriculture sector, only 18.5% of the workers were skilled in 2009-10, of which only 0.5% had formal technical education. He also briefed the audience

about the organisational structure of Ministry of Skill Development & Entrepreneurship, the functioning and key features of new section/agencies in ministry such as the establishment of National Skill Development Agency (NSDA) and how the functions of NSDA are performed across the four major agencies/department within NSDA viz. National Skills Qualifications Framework (NSQF), National Skills Quality Assurance Framework (NQAF), Labour Market Information System (LMIS), and the National Skills Research Division (NSRD). A brief presentation was made about all these sections. He also highlighted that high-value crops could boost the agricultural GDP in the country if the skills of wage workers, farmers and agripreneurs were upgraded. He spoke at length about the scope of self-employment in the areas of crop management, food processing, cash crops, high-value agriculture, agriculture information management, allied agricultural activities, input industry (seed and pesticide), farm machinery, and other industrial activities related to agriculture. He also shared the key achievements made by ASCI in terms of development of 155 Qualification Packs in different segments. He also discussed the procedure to set up a skill training centre and its' affiliation with State Skill Council and the partners of ASCI at the international (UK and Australia) and state levels, universities, and the University Grant Commission and Recognition of Prior Learning (RPL).

Ms. Nidhi Gautam, Principal Consultant, NSDA, delivered a lecture on 'Role of National Skill Development Agency' and a film was also shown on 'National Skills Qualifications Frameworks (NSQF)' for better understanding about the levels of certification from Level 1 (lowest complexity) to Level 10 (highest complexity) in skill development by citing the example of plumber. The functions and various initiatives, including establishment of Indian Institute of Entrepreneurship (IIE) in Guwahati, taken up by NSDA in the country for skill development were also presented comprehensively. The need to implement NSQF, its timeline and status were also discussed at length by mentioning the 1947 total qualifications and Sector Skills Council qualifications which has 67 agriculture qualifications. She elaborated the procedure of registration for attending the skill training, key elements of NSDA including sources and availability of fund, achievements and the overview of the transformation skill landscape. The *Pradhan Mantri Kaushal Vikas Yojana* (PMKVY) and India International Skill Centre (IISC) were also highlighted in this presentation.

Sh. Rajat Bhatnagar, an Associate in NSDC spoke about the 'Skill Ecosystem at National Level' and briefed the house that for startups under skill development initiatives, 75% of financial assistance is given by NSDC and the remaining 25% by the State Skill Development Council/State Skill Development Mission. A film was shown depicting, a woman undergoing skill training and later getting a job in a security company.

Technical Session-II: Role and Responsibility of State Skill Mission, Innovations in Skill Delivery and Level of Linkage between Agriculture and Allied Department and Agro-Industries.

This session was chaired by Dr. K.P. Singh, and Co-chaired by Dr. D.K. Behra, Director, Agriculture, Govt. of Punjab. Under this session the following three lectures were delivered:

Sh. Susheel Seth, Executive Officer, Haryana Skill Development Mission spoken about its organisational structure, and the achievements made by the Haryana government in skill development. He informed the House that the Haryana government had skill development capacity for 70,000 youths per annum. It was focusing on school dropouts and youth belonging to marginalised sections of the society (SC,ST, backward) for their skill development training at seven Skill Range Headquarters at Ambala, Rohtak, Hisar, Gurgaon, Faridabad, Panipat and Bhiwani. It was also developing linkages with the various departments and ministries for strengthening the Haryana Skill Development Mission. He gave details about the registration procedure on the website to ensure participation in skill development training.

Dr. Rupender Kaur, Deputy Director-HRM, Punjab Agricultural management & Extension Training Institute (PAMETI) delivered a lecture on 'Innovations in Linkages and Skill Delivery'. She emphasised incorporation of simulation/virtual learning, online tutorials, video lessons, expert/knowledge system, video-conferencing in skill development trainings, strengthening linkages with SAUs, State Extension functionaries and the agro-industry; and also encouraging agro-industry to participate in farmers' fair, farmers' industry etc.

Ms. Chandrakanta, Nodal Officer, Uttarakhand Skill Development Council, presented the profile, achievements, availability and requirement of skilled manpower in Uttarakhand. She briefed that the state council has imparted training to jail inmates while 13768 youth have registered for the Skill Market Connect Programme. Uttarakhand state has developed an Android application i.e. "*Kushal Uttarakhand*" to connect the youth with skill development programmes of the state. She also informed that 11911 youth participating in skill development programmes of the state is a key achievement of the skill development of the state. A documentary film was also shown on achievements of Uttarakhand state on skill development of youth.

Technical Session-III: Requirement of Skill Standards, Skill and Competency and Manpower in Agro-based Industries

This session was chaired by Dr B.S. Dhillon, and co-chaired by Dr. K.P Wasnik, Assistant Commissioner (Extension) Ministry of Agriculture & Farmer Welfare, Govt. of India. Under this session following five presentations were made:

Dr. Ashok Kumar, representative of Mother Dairy, delivered a lecture on 'Skill Requirements in Horticulture' and discussed widely the forward linkages and the business model of Mother Dairy. He said that Mother Dairy had a network of backward linkages in 16 states to get a supply of a wide range of vegetables and fruits viz. parwal, tomato, onion, grape, plum, apple, banana, mango, papaya etc. These were grown by farmers following good agricultural practices on the advisories related to annual crop plan (what, how, when and how much to grow) and other advance production technologies to increase the production with minimum cost, and were marketed through 390 outlets spread in country. He also explained the set of focused skills required at the field and factory levels to get fruits and vegetables of high quality.



Shri Jagdish Pant presented the skill requirements in the agro-processing industry setup of Patanjali Ayurveda Ltd. He claimed that availability of skilled farmers and skilled labour were the biggest challenges in production of safe and good farm produces.

Dr B.L. Saraswat, Executive Director, National Bee Board, Department of Agriculture & Cooperation, Minister of Agriculture & Farmers Welfare, Govt. of India, presented the status, opportunities, economic potential, and skill gap analysis in beekeeping in India. He opined that beekeeping provided the employment to 3.3 lakh people in India and that over 2 lakh beekeepers were directly involved in this enterprise. He reported that 65% of skilled trainings are required for 50-60 hours, 25% for 150 hours and 10% of the skilled training required for more than 200 hours in the beekeeping and honey industry. Further,

he revealed that while 280,000 skilled labourers are required, only 50,000 were available during 2016-17.

An overview of skill development opportunities in mushroom enterprise was presented by Dr V.P. Sharma, Director, ICAR-Directorate of Mushroom Research, Solan. He said that there is a huge potential of training the rural youth in the production of button mushrooms. He mentioned the requirement of 30 days of skill trainings in mushroom cultivation for the rural youth.

Shri Baldev Singh, MD, Amar Agriculture Ludhiana and Chairman, All India Agricultural Machinery Manufacturers Association, delivered a lecture on 'Skill Requirement for Agricultural Machinery Industry'. He shared that there are 250 medium-to-large-scale units and around 1,00,000 village-level artisans in India. He further added that during 2016-17 there was 18% growth in tractor production, which clearly signifies the requirement of skilled tractor drivers. He also spoke about National Vocational Education Qualification Framework and advocated better coordination among various institutes in imparting vocational training to rural youth. He said that the use of farm equipment could increase productivity up to 30% and reduce input costs by 20%. He opined that farm mechanisation has the potential to play a critical role in increasing farm productivity and improving rural employment through skill training. He also underlined the importance of such workshops to fulfill future needs to upskill and reskill the rural youth.

Technical Session IV: State-wise presentation on Skill Availability, Skill Requirement and Strategies to fill the Gaps

Under this session, five state-wise presentations were made by the respective officials of the states. This session was chaired by Dr B.S. Dhillon, and co-chaired by Dr. Rajbeer Singh, Director, ATARI, Ludhiana.

The first presentation of this session was made by Dr. Jasbir Singh, Director Agriculture, Punjab on the present status of agriculture, achievement, and its contribution to food security. He reported that skilled manpower is required at every village areas such as operation and repairing the laser land leveler, Zero Till Drill, happy seeder, drip and sprinkler irrigation system, laboratories for water and soil testing, farm-to-home and Kisan Bazar concept, vermicomposting, piggery, floriculture, vegetable farming, machine calibration, usage of different agricultural implements, integrated pest management, usage of ICT for surfing and registration of online applications, crop cutting experiment, and promotion of straw management technologies. He also mentioned about the need for trained manpower for motivating farmers for adoption of recommended technologies and package of practices at farmers field. He had also emphasised the use of existing infrastructure of Punjab Agriculture University and Guru Angad Dev Veterinary and Animal Science University, Ludhiana, for the skill development training.

Dr. D.K. Behera, Director Agriculture, Haryana, shared the state's achievements in conducting skill development training in areas of vermicomposting, tractor driving, usage of farm implement, integrated nutrient management, integrated pest management, usage of ICT for surfing and messaging to the farmers and crop cutting experiment for the rural youth. He also mentioned the achievements of skill scheme-SURYA (Skilling, Up-skilling, Re-skilling of Youth and Assessment) implemented in state by the Haryana Skill Development Mission.

Sh. Rajendra Kumar Verma, Joint Director, Agriculture, Govt. of Himachal Pradesh, presented the skill development plan and thrust areas for skill trainings viz. in operation, repair and maintenance of farm machinery and implements, beekeeping, mushroom production, ornamental fish farming etc. He shared the results of assessment of sector-wise skilled manpower availability, requirement and gap analysis in Himachal Pradesh.

On behalf of Sh. Gaurishankar, Director Agriculture, Govt. of Uttarakhand, an Assistant Director presented information about sector-wise skilled manpower availability, requirement and gap. He shared that 190 skilled labourers had been trained, out of which 95 were master trainers. He added that there is a gap of 700 skilled labourers in micro-irrigation in Uttarakhand. He also noted that that sericulture and mushroom cultivation are the other areas in the state which require skilled manpower.

Dr. Suresh Kumar, Deputy Director, Horticulture, Govt. of Uttarakhand, made a presentation and shared the achievements that Uttarakhand government, which conducts regular skilled training for gardeners, a one-year diploma course in fruit processing and a seven-day skilled training course on mushroom cultivation at two training centres; and a seven-day skilled training on beekeeping at Jyolikot and Dehradun training centres by registering 25-30 trainees per batch. Dr O.S. Chaudhary, Project Incharge, Command Area Jammu, Govt. of Jammu & Kashmir presented the existing scenario of agriculture sector in state by highlighting the per capita agriculture land availability, net cultivated area, gross irrigated area, net un-irrigated area etc. He emphasized the lack of skilled labour in agriculture and that skill training needed to be conducted for drying and processing of apricots and operation of farm machinery for the rural youth in state.

Technical Session-V: Recommendation of the Workshop and Concluding Session

The session was chaired by Dr. B.S. Dhillon. The recommendations were compiled by Dr. B.K. Paty, MANAGE; Dr. Arjun Singh Saini, DG, Horticulture, Haryana; Dr P.S. Armorikar, Director (Extension Training); Dr. Ramesh Chand, and Joint Director (Extn) DOE, DAC&FW, Gol which were presented by Dr. Arjun Singh Saini.

Some of the recommendations are summarised as below:

- SAUs to frame courses for skill development trainings.
- Special skill training course to be designed for value addition of by-products from apiculture
- 70:30 ratio of theory to practical class to be introduced for skill development training
- Geotagging of all training centres and availability of all training courses on the website; development of Android-based portal for registration and availability of trained manpower
- Skilled manpower required to be increased from the current level of 3.70 lakhs to 6.60 lakhs in different categories of 50-hr, 150-hr and 200-hr training and more in case of bee venom, bee wax training etc.
- ASCI course on beekeeping needs to be modified for bringing about the Sweet Revolution in country
- Base cost norms of skilled development training to be revised from Rs. 514 to Rs. 1000/participant/day
- Skilled training courses on post-harvest management practices and primary processing, especially in apricot drying and ginger (*sounth*)-making process in J&K
- Skilled training course on proper documentation, accounting, banking system for business transaction to be devised
- Farm mechanisation is growing presently only at 1% instead 8-10% which can increase the productivity by 30% and can reduce the input cost by 20%. It needs skill training for the rural youth.
- Skill training programmes need to be updated every two to three years to cope with new innovations.
- Job opportunity, availability and gap analysis of skilled manpower and their placement should be done at various training centres.
- Installation of greenhouse and protected agriculture require three months of skill training. Likewise, skilled manpower is required for precision farming for maintenance and repairing drip and sprinkler irrigation system.
- 10+2 syllabus needs revision to impart the skill-based education to the students.
- Synergy to be developed between agriculture department of state and the State Skill Council/Mission to identify the skill needs in agriculture sector

MY IMPRESSIONS

The venue of this workshop, Chandigarh, was quite relevant as tremendous work and progress in skill development initiatives has taken place in Haryana and Punjab. The coordination between the Department of Agriculture and Farmers Welfare, Govt. of India and Department of Agriculture & Horticulture Govt. of Haryana was outstanding in conducting the workshop. The inaugural session was short and the Hon'ble Minister focused on the pertinent issues regarding skill development in the country. The deliberations made by various resources persons of ASCI and NSDC were much educative

and informative. The states of Haryana, Punjab and Uttarakhand presented a very clear picture of availability, requirement and gap analysis of the skilled manpower in their agriculture and horticulture sector. It would have been better if the officials of government of Uttar Pradesh would have also presented the status of skill development in agriculture and requirement of skilled manpower in the state. After every lecture, an Open House Discussion for five minutes was held to make the workshop more interactive which helped the participants to share their views and to suggest innovative mechanisms in strengthening the model of skill development training for the country. This workshop offered an opportunity for the training organisations like Krishi Vigyan Kendras and ICAR's Institutes to become the partners of ASCI to conduct the skill development trainings for the rural youth to make them employed.

FINAL REMARKS

As a participant, I enjoyed the presentations of each and every session and I learnt a lot on skill development.

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