

# HRM INITIATIVES AND ACCOMPLISHMENTS OF ICAR (2014-20)



**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**  
KRISHI BHAVAN, NEW DELHI – 110 001  
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# HRM Initiatives and Accomplishments of ICAR (2014-20)



**Human Resource Management Unit**  
**Indian Council of Agricultural Research**  
Krishi Bhavan, New Delhi – 110 001



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MINISTER OF AGRICULTURE & FARMERS WELFARE,  
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KRISHI BHAWAN, NEW DELHI



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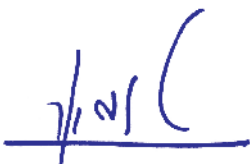
## संदेश

मुझे यह जानकर हार्दिक प्रसन्नता है कि भारतीय कृषि अनुसंधान परिषद द्वारा विगत छः वर्षों (2014-20) में, परिषद के सभी वर्गों के कार्मिकों के प्रशिक्षण एवं क्षमता निर्माण के लिए की गई विभिन्न पहल एवं उपलब्धियों का संकलन **"HRM Initiatives and Accomplishments of ICAR (2014-20)"** नामक प्रकाशन के रूप में किया जा रहा है।

परिषद ने भौतिक एवं वित्तीय संसाधनों के साथ मानव संसाधन की महत्ता समझते हुए प्रशिक्षण एवं क्षमता निर्माण पर विशेष जोर दिया है। साथ ही, परिषद के विभिन्न संस्थानों एवं मुख्यालय में कार्यरत कार्मिकों के लिए **"भाकृअनुप मानव संसाधन प्रबंधन नीति : प्रशिक्षण एवं क्षमता निर्माण"** को प्रभावी तौर पर क्रियान्वित किया है, जिससे प्रशिक्षणार्थियों की संख्या के साथ कार्य दक्षता, प्रदर्शन एवं सुव्यवहार में उत्तरोत्तर वृद्धि दर्ज की गई है एवं परिषद निर्धारित लक्ष्यों को प्राप्त करने में सफल रही है।

मुझे आशा है कि ये प्रशिक्षण कार्यक्रम निर्बाध रूप से चलेंगे तथा इनमें कार्मिकों की संख्या बढ़ने के साथ उनके कामकाज की गुणवत्ता एवं उपयोगिता में निरन्तर वृद्धि होगी। इस तरह, सभी वर्गों के कार्मिक दक्षता एवं निष्ठा के साथ परिषद के मिशन के अनुरूप देशहित में अमूल्य योगदान देते रहेंगे।

परिषद को संशोधित **"HRM Initiatives and Accomplishments of ICAR (2014-20)"** के सफलतापूर्वक प्रकाशन के लिए मेरी ओर से बधाई और शुभकामनाएं।

  
(नरेन्द्र सिंह तोमर)



कैलाश चौधरी  
KAILASH CHOUDHARY



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GOVERNMENT OF INDIA

दिनांक : 08<sup>th</sup> अक्टूबर, 2020

## संदेश

मुझे यह जानकर खुशी है कि भारतीय कृषि अनुसंधान परिषद, नई दिल्ली ने पिछले छः वर्षों में अर्थात् 2014-2020 के दौरान भारतीय कृषि अनुसंधान परिषद में सेवारत सभी वर्गों के कार्मिकों के प्रशिक्षण और क्षमता निर्माण के संबंध में मानव संसाधन प्रबंधन की अच्छी पहल कर उन्हें पूरा किया है। इसी क्रम में परिषद, **"HRM Initiatives and Accomplishments of ICAR (2014-20)"** नामक प्रकाशन का एक संशोधित संस्करण प्रकाशित कर रहा है। इस अवधि के दौरान भारतीय कृषि अनुसंधान परिषद ने प्रारम्भिक स्तर पर कार्यरत कार्मिकों (कुशल सहायक स्टॉफ एवं चालक) से लेकर वरिष्ठ अधिकारियों के प्रशिक्षण कार्यक्रम आयोजित किए और **"भाकृअनुप मानव संसाधन प्रबंधन नीति : प्रशिक्षण एवं क्षमता निर्माण"** को सफलतापूर्वक क्रियान्वित किया है। प्रशिक्षण कार्यक्रमों के परिणामस्वरूप सभी वर्गों के कार्मिकों के व्यवहार एवं कार्यप्रणाली में आशातीत वृद्धि दर्ज की है।

मैं छः साल की अवधि के दौरान मानव संसाधन प्रबंधन के क्षेत्र में पहल और उपलब्धियों पर भाकृअनुप की सराहना करता हूँ। मुझे उम्मीद है कि यह प्रकाशन भारतीय कृषि अनुसंधान परिषद के कार्मिकों के साथ-साथ भारत सरकार के अन्य मंत्रालयों/विभागों एवं देश के कृषि विश्वविद्यालयों में प्रशिक्षण और क्षमता निर्माण को और अधिक बढ़ाने के लिए उपयोगी होगा।

**शुभकामनाओं सहित।**

(कैलाश चौधरी)





त्रिलोचन महापात्र, पीएच.डी.

सचिव एवं महानिदेशक

**TRILOCHAN MOHAPATRA, Ph.D.**  
SECRETARY & DIRECTOR GENERAL

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## FOREWORD

**T**raining and Capacity Building of employees allows acquiring new skills, sharpening existing ones, improves performance, increases productivity and promotes leadership qualities. This not only improves the growth and development of the individuals but the Organization as a whole. Since 2014, Indian Council of Agricultural Research (ICAR) has been laying more thrust and focus on competency enhancement of all categories of employees for better realization of organizational mandate and vision.

ICAR is served by about 17,000 employees under four different categories namely Scientific, Technical, Administrative and Skilled Support Staff. Developing competency of each category of employee as per National Training Policy - 2012 of GoI was a great challenge for ICAR. The concerted and focused initiatives have been taken to enhance the efficiency and effectiveness of each employee through various training and capacity building programmes with the creation of HRM Unit at ICAR Hq in 2014. Subsequently, Institutionalized System of Training was developed and “*ICAR HRM Policy: Training and Capacity Building*” was formulated and implemented. Many new HRM activities were initiated in ICAR like trainings of regular Drivers and Skilled Support Staff with field/exposure visit and international exposure visits of multidisciplinary Scientific and Administrative staff. Besides, trainings were designed and organized for about fourteen sectoral and functional groups. During 2014-20, 473 new specialized programmes were organized, in which 6433 employees of various categories participated, out of which 4883 (75.9%) participants either availed the opportunity first time after joining ICAR service or attended a specific programme after getting the new responsibilities. Many Central Govt. Ministries/Departments including DoPT have acknowledged the HRM initiatives and accomplishments of ICAR.



The valuable support and contributions of Directors and HRD Nodal Officers of ICAR-Institutes/HQs for HRM Initiatives and for their successful implementation in a span of six years is highly appreciable. Sincere and dedicated efforts of HRM Unit for effective coordination, implementation and monitoring of training functions in ICAR is praiseworthy. The salient HRM initiatives, activities and achievements of ICAR presented and compiled in this publication “**HRM Initiatives and Accomplishments of ICAR (2014-20)**” will be useful for various stakeholders and other Ministries/Departments.

Dated the 8<sup>th</sup> October, 2020  
New Delhi



(T. MOHAPATRA)



## PREFACE

Indian Council of Agricultural Research (ICAR) has been laying emphasis and greater focus on Training and Capacity Building of all categories of ICAR employees (Scientific, Technical including Drivers, Administrative including Finance and Stenographer Grades, and Skilled Support Staff) since 2014. ICAR appointed Assistant Director General (HRM) in 2014 as Training Manager as per National Training Policy - 2012 of GoI and created HRM Unit at ICAR Headquarters in September, 2014 in order to develop a conducive ecosystem of training for giving appropriate direction, speed and scale to the Training and Capacity Building of employees of all categories. Therefore, Institutionalized System of Training has been developed and “*ICAR HRM Policy: Training and Capacity Building*” has been formulated and implemented. Special focus has been given for training and capacity building of those categories of employees who were never considered for any kind of effective training in the past.

For the first time in ICAR, many strategic initiatives were taken like implementation of Systematic Approach to Training through Training Needs Analysis; Design, Development, Implementation, Evaluation, and Impact Assessment of Training. First time, ICAR-Institutes/HQs identified 253 training need areas for all categories of employees; developing Annual Training Plan; organized large number of new specialized training programmes for Scientific Staff, HRD Nodal Officers, Vigilance Officers, Technical Staff, Administrative Staff, Stenographer Grades, Farm Managers, Guest House Incharges/ Caretakers, Regular Drivers, and Skilled Support Staff with field/exposure visits. Besides, for the first time Executive Development Programmes for Senior Officers of ICAR have been organized with international exposure visits of multidisciplinary Scientific and Administrative staff together. New specialized programmes have also been designed and organized for staff dealing with Security, Court Cases, Works/Estate/Building Maintenance and Assets Management. Ever first specialized Trainers Development Programme for Developing Masters’ Trainers in ICAR has been designed and organized, and 22 Masters’ Trainers were identified in different sectoral and functional areas of Administration and Finance for imparting training.

During the initial phase of implementation of Policy (2014-17), many perceptible changes were noticed in the ICAR system which became more explicit during the effective phase of Policy implementation (2017-20). On average basis, the number of employees trained were 3204 and 3350 during 2014-17 and 2017-20 as compared to 2409 during 2013-14. In 473 new specialized programmes organized during 2014-20, 6433 employees of various categories participated, out of which 4883 (75.9%) participants either availed the





first-time opportunity to attend any training programmes after joining ICAR service or attended a particular type of programme first-time after getting the specific role/charge.

Based on the feedback of 4402 Trainees as well as their Reporting Officers of 106 ICAR-Institutes, the overall Impact of training was assessed as Considerable-Great Extent as per proforma developed by DoPT, GoI. The study on effectiveness of trainings conducted/attended during 2017-18 in ICAR based on 1782 staff belonging to all four categories from 106 ICAR-Institutes across 26 states/UTs revealed that pooled perceived training effectiveness index (PTEI) was 3.86, referring medium effectiveness of trainings. Significant behavioural changes and changes in practices as a consequence of exposure to the trainings were observed.

The HRM Initiatives and Accomplishments of ICAR during 2014-20 have been ascribed to valuable guidance and support received from Dr S Ayyappan, Former Secretary, DARE & DG, ICAR in the initial phase; and later from Dr T Mohapatra, Secretary, DARE & DG, ICAR. and Sh C Roul, Former Special Secretary, DARE & Secretary, ICAR, Sh Sushil Kumar, Former Addl Secretary, DARE & Secretary, ICAR, Sh Sanjay Singh, Addl Secretary, DARE & Secretary, ICAR and Sh B Pradhan, Special Secretary & Financial Advisor (DARE/ICAR) in the effective phase of Policy implementation. It is noteworthy to mention the support and contribution of all Deputy Director Generals; Directors of ICAR-Institutes with special mention of all the Directors of ICAR-NAARM, Hyderabad who contributed during this period; and all HRD Nodal Officers of ICAR without which the Initiatives could have not been turned into the Accomplishments.

I would like to particularly mention the valuable contributions made by Dr N K Jain, Principal Scientist (HRM Unit) & HRD Nodal Officer, ICAR HQs; entire IFD team and Sh Kanhaiya Chaudhary, Former Director (Special Duty). The necessary support was also provided by Ms Anjali Sharma, SO; Sh Ajay Kohli, PA; Sh Sanjay Kumar, Assistant and Ms Abhilasha Saini, Assistant from HRM Unit, ICAR HQs from time to time.

I hope that the information compiled in this publication ***“HRM Initiatives and Accomplishments of ICAR (2014-20)”*** will be useful for further scaling up the Training and Capacity Building of employees of ICAR as well as of other Central Govt. Ministries/ Departments.

Dated the 15<sup>th</sup> September, 2020

(A K Vyas)

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## ACKNOWLEDGEMENT

The publication *“HRM Initiatives and Accomplishments of ICAR (2014-20)”* could be actualized due to valuable guidance and support of Dr S Ayyappan, Former Secretary, DARE & DG, ICAR in the initial phase; and later from Dr T Mohapatra, Secretary, DARE & DG, ICAR; Sh C Roul, Former Special Secretary, DARE & Secretary, ICAR; Sh Sushil Kumar, Former Addl Secretary, DARE & Secretary, ICAR, Sh Sanjay Singh, Addl Secretary, DARE & Secretary, ICAR and Sh B Pradhan, Special Secretary & Financial Advisor (DARE/ICAR) in the effective phase of Policy implementation for taking many strategic initiatives like implementation of Systematic Approach to Training as well as formulation and implementation of *“ICAR HRM Policy: Training and Capacity Building”* for all categories of ICAR employees. The contributions of Senior Officers of ICAR are highly acknowledged.

The contributions made by all Deputy Director Generals, Assistant Director Generals and Directors of ICAR-Institutes/HQs are commendable in effective implementation of various training functions and the Policy in the Council. ICAR-NAARM, Hyderabad has played a key role in the Training and Capacity Building of various categories of ICAR employees. The efforts of HRD Nodal Officers working in various ICAR-Institutes/HQs are sincerely acknowledged for effective and efficient implementation of training functions in their Institutes/HQs.

Sincere efforts of Dr N K Jain, Principal Scientist (HRM) & HRD Nodal Officer, ICAR HQs are noteworthy and duly acknowledged for assisting in overall coordination, monitoring, implementation and management of training needs of ICAR, and in bringing out this publication. The necessary support provided by Ms Anjali Sharma, SO; Sh Ajay Kohli, PA; Sh Sanjay Kumar, Assistant and Ms Abhilasha Saini, Assistant from the HRM Unit, ICAR HQs time to time is also duly recognized. The contribution of DKMA, New Delhi is also duly acknowledged for printing of this document.

**ADG (HRM) &  
Training Manager, ICAR**



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# EXECUTIVE SUMMARY

**I**ndian Council of Agricultural Research (ICAR), an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, New Delhi has been laying more emphasis and greater focus on Training and Capacity Building of its employees since 2014. Keeping in view of the importance of training and gaps in training of the employees, ICAR has taken concerted initiatives for training and capacity building of all categories of employees. A brief summary of the major outcomes and initiatives for the last six years are as under:

## Major Outcomes

- Compared to 2013-14, there was considerable improvement in average number of employees undergone trainings particularly in case of Administrative, Technical and Skilled Support Staff, where per cent improvement was 62.9, 112.4 and 1082.5, respectively along with overall improvement of 39.1 per cent in all the categories of employees on the basis of mean data of 3 years (2017-20). This may be ascribed to effective implementation of the Policy.
- In terms of per cent of total employees trained, 9.2, 14.1, 10.0 and 6.6 per cent more Technical, Administrative including Finance, Skilled Support Staff and all employees, respectively got training opportunities during 2017-20 (on average basis) compared to 2013-14.
- Compared to 2013-14, ICAR-Institutes/HQs organized 49.3 and 700.0 per cent more training programmes for Technical and Skilled Support Staff, respectively during 2017-20 (on average basis).
- A total of 473 new specialized training programmes were organized, in which 6433 employees of various categories participated, out of which 4883 (75.9%) participants either availed the first-time opportunity to attend any training programme after joining ICAR service or attended a particular type of programme first-time after getting the specific role/charge.
- There has been much better capacity utilization of trainings organized across the categories, as reflected from substantially higher number of employees trained without commensurate increase in number of trainings organized.
- Though the budget utilization during 2017-20 was 16.3 per cent higher over 2013-14 but there was drastic increase (39%) in the overall manpower trained particularly in case of Technical (112%), Administrative (63%) and Skilled Support Staff (1083%) due to judicious and economic utilization of the HRD budget.



- For the first time in ICAR, a study conducted on the effectiveness of trainings attended by 1782 staff of all four categories during 2017-18 revealed that pooled perceived training effectiveness index (PTEI) was 3.86, referring medium effectiveness of trainings. The mean PTEI score was the highest for SSS (3.94) followed by Administrative staff (3.90).
- Significant behavioural changes and changes in practices as a consequence of exposure to the trainings were observed in the study and it was concluded that the trainings organized by ICAR should continue for all staff to bring about desirable changes in competencies.

### New ICAR Initiatives

- Training Manager of ICAR i.e. Assistant Director General (Human Resource Management) was appointed in 2014 in compliance with the National Training Policy- 2012 of GoI.
- HRM Unit at ICAR Headquarters was created in September, 2014 and made fully functional.
- Institutionalized System of Training has been developed in ICAR with the nomination of HRD Nodal Officers in all ICAR-Institutes/HQs and attached to the PME Cell.
- “ICAR HRM Policy: Training and Capacity Building” for all the categories of employees has been formulated and implemented.
- Training Board of ICAR has been constituted to give overall directions for the implementation of the ICAR HRM Policy in the Council.
- Systematic Approach to Training has been implemented through Training Needs Analysis (TNA); Design, Development, Implementation, Evaluation, and Impact Assessment of Training.
- 253 Training Need areas have been identified for all categories of employees (128, 55, 39 and 31 training areas for Scientific, Technical, Administrative including Finance and Skilled Support Staff, respectively).
- ICAR-Institutes/HQs are developing Annual Training Plan (ATP) for all the categories of employees since 2016-17.
- Organized 04 Executive Development Programmes for 65 Senior Officers of ICAR with 3-5 days In-country component, and 10 days International Exposure visit.
- Eight Competency Development/Enhancement Programmes on “Effective Implementation of Training Functions by HRD Nodal Officers of ICAR” were organized by ICAR-NAARM, Hyderabad in which almost all officers have participated.
- Training Workshop for Vigilance Officers of ICAR was designed, developed and organized by ICAR-NAARM, Hyderabad during 2018-20 in 02 batches in which 67 Vigilance Officers of 67 Institutes participated. All the participants attended such kind of training first time after taking over the charge of Vigilance Officer in their respective Institutes.
- Training programme on “IP Valuation and Technology Management” was organized by ICAR-NAARM, Hyderabad during 2018-20 in 02 batches in which 44 ITMU/ZTMU Incharges participated. All the participants attended such kind of training first time after



taking over the charge of ITMU/ZTMU Incharge in their respective Institutes.

- MDP on “Priority Setting, Monitoring and Evaluation (PME) of Agricultural Research Projects” for PME Cell Incharges of ICAR was organized by ICAR-NAARM, Hyderabad in 02 batches during 2018-20 in which 64 PME Cell Incharges of 64 Institutes participated. About 97% PME Cell Incharges participated first time in such type of training.
- Seventy seven specialized training programmes for Technical staff were designed, developed and organized based on 48 identified Training Needs by 17 leading ICAR- Institutes during 2016-20. In these programmes, so far 1462 Technical staff (1405 ICAR employees + 57 Non-ICAR employees) participated, out of which about 38.9% Technical staff got first time opportunity after joining ICAR service.
- Training programme on “Farm Management” was designed, developed and organized by IIFSR, Modipuram during 2016-20 in which 145 Technical staff associated with farm/Farm Manager were trained, out of which about 24% got first time opportunity after joining ICAR service.
- Training programme on “Automobile Maintenance, Road Safety and Behavioural Skills” was designed, developed and organized by ICAR-CIAE, Bhopal during 2016-20 for Regular Drivers (Technical grade) of ICAR. In these programmes, 310 Regular Drivers undergone training in 11 Batches, out of which 90% Drivers got first time opportunity after joining ICAR service.
- A specialized training programme for Guest House Incharges/Caretakers on “Hospitality Management” in collaboration with Institute of Hotel Management, Catering Technology & Applied Nutrition (IHMCT & AN), Hyderabad was designed, developed and organized by ICAR-NAARM, Hyderabad in 02 batches during 2018-20 in which 50 Guest House Incharges/Caretakers of ICAR-Institutes participated, out of which 94% Guest House Incharges/Caretakers attended first time after joining ICAR service.
- A specialized programme on “Trainers Development Programme for Developing Masters’ Trainers in ICAR” was designed, developed and organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2019-20. In this training programme, 22 Administrative and Finance staff participated, out of which 100% attended first time such type of training.
- Training programme for Technical and Administrative staff dealing with Security or Security Officers was designed, developed and organized by ICAR-CPRI, Shimla in coordination with HRM Unit, ICAR HQs during 2019-20 in which 33 such category of staff participated, out of which, all attended first time such type of programme after joining ICAR service.
- Training programme on “Improving Skills of Administrative Staff of ICAR dealing with Court Cases” was designed, developed and organized by ICAR-CAZRI, Jodhpur in coordination with Legal Cell and HRM Unit, ICAR HQs during 2019-20 in which 18 Administrative staff dealing with court cases participated, out of which, all attended first time such type of programme after joining ICAR service.



- Training programme on “Repair and Maintenance of Office, and Residential Building including Guest Houses” was designed, developed and organized by ICAR-CIAE, Bhopal in coordination with Works/Engineering Cell and HRM Unit, ICAR HQs during 2019-20 in which 29 Administrative/Technical staff associated with Works/Estate/Building Maintenance participated. Out of which, all attended first time such type of programme, and about 31% attended first time any training programme after joining ICAR service.
- Training programme on “Assets Management” was designed, developed and organized by ICAR-IARI, New Delhi in coordination with Finance Division and HRM Unit, ICAR HQs during 2019-20 in which 28 administrative including finance category of staff participated. Out of which, all attended first time such type of training, and about 32% attended first time any training programme after joining ICAR service.
- A Capacity Building Programme for CJSC members was designed, developed and organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2019-20 in which 89 CJSC Members of ICAR Institutes/HQs participated. All the CJSC member participated first time in such kind of training programme after elected as CJSC member.
- Training programme on “Enhancing Efficiency and Behavioural Skills” was designed, developed and organized by ICAR-NAARM, Hyderabad during 2016-20. So far, 333 Stenographers in various grades were trained in 11 batches, out of which about 81% Stenographers got training first time after joining ICAR service.
- Training of Skilled Support Staff (SSS) was initiated and made mandatory to be part of Annual Training Plan of all the ICAR-Institute/HQs. So far, 311 training programmes have been conducted by various ICAR-Institutes/HQs in which 2852 SSS have been trained since 2014. About 95% SSS got first time opportunity to attend training after joining ICAR service.
- 1-2 days Field/Exposure Visit has been included as an integral part of the Training Programme of SSS and 526 SSS had the first time opportunity of field/exposure visit outside the Institute.
- Weekly (one-hour one-day/week) in-house trainings at ICAR HQs was initiated without any financial liability. About 340 administrative staff of ICAR HQs have participated in such training sessions.
- ICAR is not only arranging training programmes for the serving employees of all categories but also provides opportunity to those employees who are going to retire shortly to acquaint them with the post-retirement benefits admissible to live better, peaceful and healthy post-retirement life.
- Based on ATP submitted for 2016-17, 2017-18 & 2018-19 and Annual Physical and Financial Targets and Achievements Report 2016-17, 2017-18 & 2018-19, the monitoring was carried out for all the ICAR-Institutes and feedback was given for proper implementation of ATP.
- Impact Assessment of training programmes attended during 2016-17 and 2017-18 by various categories of employees was done as per DoPT format. Based on the feedback of 4402 Trainees and their respective Reporting Officers of 106 ICAR-Institutes, the overall



Impact of training was rated as Considerable - Great Extent.

- Online Training Management Information System has been developed and implemented w.e.f. 1<sup>st</sup> April, 2019 for effective tracking of different aspects of training.
- Training details of about 10,000 employees of various categories has been updated in the ERP system of ICAR.
- A chapter on “Training and Capacity Building” has been introduced in the Annual Report of all ICAR-Institutes and DARE/ICAR since 2016.
- Almost 100% paperless communication has been achieved by the HRM Unit with all 114 ICAR-Institutes/HQs and other non-ICAR Institutes since 2016.
- Created and operationalized a WhatsApp group named as ‘HRD Nodal Officers-ICAR’ since 2016 which remains live for 24 x 7h for exchange of training related information among all ICAR-Institutes/HQs.

### Other Initiatives

- ICAR-NAARM, Hyderabad organized 56 training programmes in which 1501 participants attended various capacity building programmes during 2013-14 while based on 3 years’ average, number of training programmes organized were 44 and 77 during 2014-17 and 2017-20, respectively in which 1977 and 3399 trainees participated.
- Based on TNI, ICAR organized 12 training programmes for Scientific staff, other than winter/summer schools, CAFT/short trainings in which 204 Scientists (155 ICAR employees+ 49 Non-ICAR employees) in various grades participated during 2017-20. About 31% got training first time after their FOCARS training.
- Organized 06 Leadership Workshops for Senior Officers of ICAR/ASRB in which 95 such officers participated.
- Ninety two Technical staff (88 from ICAR Institutes and 04 from SAUs) associated with Library were trained in training programme on KOHA by ICAR-NAARM, Hyderabad during 2017-20 in 03 batches, out of which 87% attended first time after joining ICAR service.
- Customized 16 training programmes were organized by competent ICAR-Institutes for Administrative staff in which 418 Administrative staff including finance undergone training during 2017-20.
- Two Training Programmes on “Establishment and Financial Matters” were organized by ICAR-NAARM, Hyderabad in which 67 officials participated.
- Training Programme on “Reservation in Service including Reservation Roster and Reservation Register” was organized by ICAR-NAARM, Hyderabad during 2016-17 in which 30 officials of ICAR participated.
- Generated a sum of Rs 318.0 lakh through participation of employees particularly from SAUs, CAUs, Central/State Govt. and ICAR funded KVKs during 2017-20.





## 1. Introduction

Indian Council of Agricultural Research (ICAR) is an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India with the Headquarters at New Delhi. It is a Scientific Research & Development organization involved in scientific innovations and technology development in the field of agriculture and allied sciences through its 114 Institutes spread over the entire country. ICAR is served by about 17,100 employees under four different categories namely Scientific, Technical, Administrative including Finance and Skilled Support Staff. Developing competency of each employee of different category as per National Training Policy - 2012 of GoI is a great challenge for an organization like ICAR. This need concerted and focused initiatives to enhance the efficiency and effectiveness of each employee through various training and capacity building programmes.

Training is a pro-active systematic process of educating and developing the organization's human resource so that they have the desired knowledge, skills, attitude and understanding needed to manage their present and future jobs/roles with enhanced individual and organizational performance (Fig. 1). Training is a very important activity for an organization, be it private or public. It is fruitful to both the employer and the employees of an organization. An employee becomes more efficient and productive if he/she is trained well through proper training and capacity building programmes. Organizations have grown to understand this over the past few decades and have started giving due attention to it, along with the required budgets. With the advent of globalization, technological and information revolution, it has become imperative for the Organizations to have a well-trained staff in order to achieve the Organizational Vision, Mission and Goals.

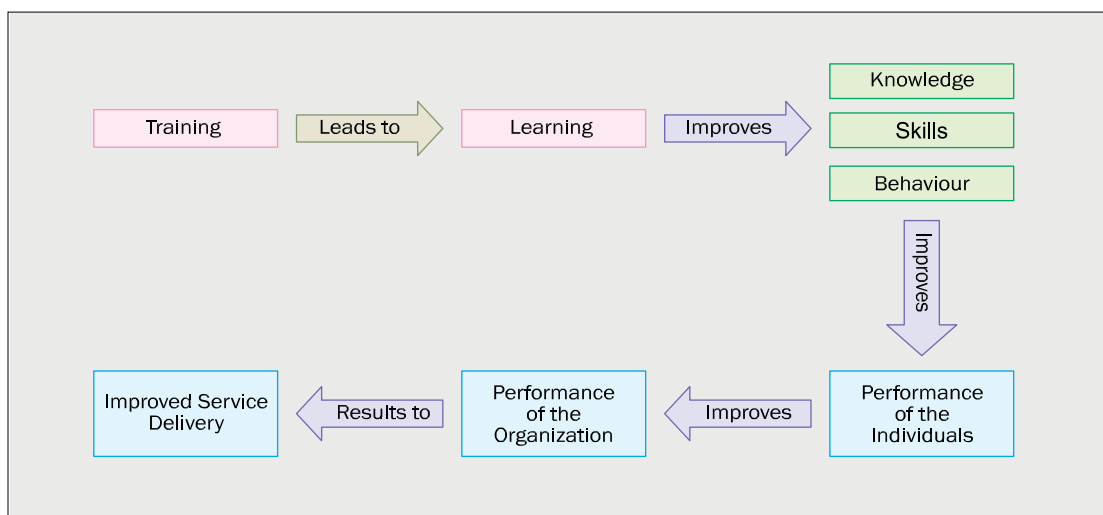


Fig. 1: Training benefits



Training is vital for an organization owing to following reasons (DoPT, 2016):

- i. In the dynamic environment and scenarios, Organizations need to update themselves continuously in order to meet ever-increasing customer demands. Many Organizations which did not change to keep up with the times have perished and turn redundant. The continuous updating requires proper training.
- ii. Technological revolution has led to continuous pressure on the Organizations' learning capacity. Those who adapt and welcome new technologies emerge as market leaders. Organizations can achieve this through continuous training.
- iii. Today's world has emerged as a global village and the entire earth has become a small place and no state or country is isolated and escapes from its outcome. Countries are constantly impacted by global economic, sociological and cultural changes and the trends in every aspect of life. The lifestyles are changing and the expectations of the customers/citizens are changing very fast. Hence, in order to meet the ever-increasing demands of the citizens, the Organization have to continuously train their employees to improve their knowledge, skills and behaviour.
- iv. Training has greater significance for the public Organization and Departments, as they deal with public at large. The policies they make influence the quality of lives of the citizens and the quality of their service delivery impacts the citizen satisfaction. The ethics, ethos and behaviours of the Government officers decide the brand image of the Government. Therefore, it is mandatory for the public Organizations to be continuously efficient and effective through regular training of the human resources.
- v. When a person joins an organization, he/she is raw and not familiar with the relevant Acts, Rules, Regulations and the various financial/administrative/technical codes to be followed in their work, even about the work culture and environment of the Organization. They need to be provided with the appropriate knowledge, skills and behaviours by way of Induction and Orientation Training. Appropriate training is always required whenever there is change in the role, responsibilities and organizational position so that he/she can take up the new challenges in short period of time.

Though the importance of training has been long realized by the private sector, but public Organizations are yet to institutionalize training in a focused manner. The following are the commonly observed gaps in training in Government sector (DoPT, 2016)

- Training programmes are not always designed based on systematically identified training needs.
- Training programmes are many times generic and not aimed to develop specific competencies.
- Using adult learning techniques in training programmes is not by design but incidental.
- Target group for a training programme is not properly identified and nominated. The



nomination process does not always guarantee that right persons are nominated for right training. Many a time, the employees that are less occupied with work are sent for training and the persons with key responsibilities and work are not spared for training by the HoDs.

- Many a time, training is not given for the lower level and gross-root level employees and no mapping of training needs is carried out at those levels.
- Training programmes are considered by many trainees as respite from their regular work and not regarded as learning events.
- There are no proper practices of evaluation of training interventions carried out.
- Identification of training needs in behavioural and managerial competencies and conducting appropriate training programmes in these areas is uncommon in Government.

The Govt. of India perceived the importance of training since beginning and created a separate Ministry/Department (DoPT). Later, the Indian Council of Agricultural Research has realized to lay more emphasis and greater focus on Training and Capacity Building of its employees since 2014. Keeping in view of the importance of training and gaps in training of the employees, ICAR has taken up following concerted steps for training and capacity building of all four categories of ICAR employees (Scientific, Technical including Drivers, Administrative including Finance and Stenographer Grades, and Skilled Support Staff).

## 2. Appointment of ADG (HRM) as Training Manager

ICAR realized the importance of Training and Capacity Building of its employees in true sense and for the first time created a designated post of Assistant Director General (Human Resource Management) and appointed the Officer in Joint Secretary Grade in 2014 to act as Training Manager of ICAR as per National Training Policy - 2012 of GoI. The Officer was appointed with the following duties and responsibilities:

- Overall coordination, implementation, monitoring and management of training needs & policies for the Council
- Evaluate and advice on all strategic HR needs and requirements of the Council

Besides, ADG (HRM) was assigned to collaborate with DoPT, GoI from time to time for effective implementation of Training Functions in ICAR which is spread across the Country's length and breadth with about 17,100 employees of four different Categories.

## 3. Creation of HRM Unit at Headquarters

The HRM Unit was created at the ICAR Headquarters in September, 2014 for strengthening and facilitating training and capacity building of Scientific, Administrative, Technical and Skilled Support Staff working in 114 ICAR-Institutes/HQs. Gradually, the Unit was strengthened with necessary staff required for effective functioning of the Unit. The Unit has effectively developed the Institutionalized System of Training in ICAR; Systematic Approach to Training; formulated ICAR HRM Policy: Training and Capacity Building; performed Training Needs Analysis



(TNA) of all categories of employees; Developing Annual Training Plan (ATP) based on TNA; facilitating Design and Development of training programmes for all categories of employees; Implementation of Training Programmes for Scientific, Technical including Regular Drivers, Administrative including Finance, Stenographer Grades and Skilled Support Staff; Evaluation of Trainings; Monitoring and Assessment of ATP Implementation; Impact Assessment of trainings attended; Developed Training Management Information System (TMIS) and Maintaining Database of trainings and trained manpower, etc.

#### 4. Development of Institutionalized System of Training

In order to have proper coordination, implementation, monitoring and management of training needs of all categories of employees of ICAR-Institutes spread across the Country, HRD Nodal Officers were nominated by respective Institute's Directors, and attached to PME Cell in all ICAR-Institutes. Normally, HRD Nodal Officers are Principal Scientists/Head who are quite senior in the Institute and have good understanding of the training needs of employees. The list of such Nodal Officers, who are presently serving the Institute/HQs is given in the Annexure I. Besides, number of guidelines and advisories were issued with the approval of the Competent Authority in the ICAR to facilitate the Nodal Officers for effective implementation and monitoring of training and capacity building programmes in their respective ICAR-Institute/HQs. Such guidelines and advisories have been given in the Annexure II and III. In order to have uniform budgetary provisions throughout the ICAR system for judicious and economic utilisation of HRD funds by the Organising and Sponsoring ICAR-Institutes, Training Costs/Budget Plan for the Training Programmes organized from HRD fund of the Institute/HQs have been framed and executed with the approval of the Competent Authority in the ICAR (Annexure IV and VII). Besides, some Office Memorandum related to inclusion of employees of SAUs, CAUs and ICAR funded KVKs; amendments in ICAR HRM Policy; field/exposure visit of SSS; non-charging of Course fee, have also been given in the Annexure V to X.

#### 5. Formulation and Implementation of ICAR HRM Policy: Training and Capacity Building

For the first time, “**ICAR HRM Policy: Training and Capacity Building**” has been formulated in sync with National Training Policy-2012 of Government of India and approved for implementation for all categories of ICAR employees (<https://hrm.icar.gov.in/data/ICAR-HRM-policy-2018.pdf>). This policy focuses on the tenet of ‘competency-based training for all’ which means that all cadres should get due emphasis for training and capacity building. The Policy gives guidelines on competency framework; objectives; nature of training; training targets; role of ICAR and training institutions; trainer development; foreign training; funding; implementation, coordination, monitoring and evaluation. It also encompasses model training schemes for scientific, technical, administrative (including finance and accounts), stenographer services and skilled support staffs. The Policy envisages for transforming the employees of



ICAR by developing strategic human resource management system, which shall look at the individual as a vital resource to be valued, motivated, developed and enabled to achieve the overall Organization's Mission and Objectives. Though, initiation of implementation of Policy started in later part of 2014 but the effective implementation begins since 2016-17.

The important features of the Policy which have been effectively implemented so far are enumerated below.

- i. Training Manager of ICAR to the level of ADG has been appointed for overall coordination, implementation, monitoring and evaluation of training functions in ICAR.
- ii. HRM Unit at ICAR HQs has been created in September, 2014.
- iii. HRM Unit is acting as Nodal Agency for the coordination and implementation of HRM Policy and issuing appropriate guidelines from time to time.
- iv. Institutionalised System of Training has been developed at each ICAR-Institute/HQs.
- v. Competencies of the HRD Nodal Officers are being developed by ICAR-NAARM, Hyderabad in coordination with HRM Unit of ICAR.
- vi. Training Board chaired by the DG, ICAR has been constituted and it has started giving overall direction for the implementation of the Policy.
- vii. Systematic Approach to Training (SAT) in ICAR is being implemented for all categories of employees.
- viii. Advisories from time to time are issued by HRM Unit, ICAR HQs for organising training programmes based on 'Systematic Approach to Training'.
- ix. Cadre Training Plan (CTP) for each category of employees have been designed.
- x. Training Needs of all categories of employees have been identified in all ICAR-Institutes.
- xi. Annual Training Plans (ATP) is being developed and implemented for all categories of employees in all ICAR-Institutes/HQs.
- xii. Specialised Training Programmes for different categories of employees have been developed and being organising.
- xiii. Six monthly monitoring of implementation of ATP and fund utilisation is being done.
- xiv. Included 1-2 days field/exposure visit in the training programmes for SSS.
- xv. Impact Assessment of training programmes has been performed for trainings attended during 2016-17 and 2017-18 by about 4400 employees of different categories.
- xvi. ICAR-NAARM is supplementing the current training programmes with distance and e-Learning courses/programmes.
- xvii. Special focus is given on behavioural/attitudinal training.



- xviii. Developing cadres of trainers in different sectoral and functional specializations.
- xix. Selection Committee under the Chairmanship of DG, ICAR is in place to finalize participation in foreign trainings.
- xx. Monitoring of implementation of ICAR HRM Policy: Training and Capacity Building is being done.
- xxi. Using the services of the Training Institutions like ICAR-NAARM in outsourcing training.
- xxii. Maintaining the database of trained manpower for future reference in the ERP system.
- xxiii. Training Management Information System (TMIS) has been developed and implemented to facilitate training and development activities of ICAR as paperless.
- xxiv. A Chapter on Training and Capacity Building activities in the Annual Report of DARE/ICAR and ICAR-Institutes has been introduced since 2016.

## 6. Constitution of Training Board of ICAR

As per approved new ICAR HRM Policy: Training and Capacity Building, a Training Board under the Chairmanship of DG, ICAR has been constituted and started giving overall direction for the implementation of the Policy w.e.f. 1<sup>st</sup> April, 2018. The composition of present Training Board of ICAR is as under:

1. Director General, ICAR	Chairman
2. Secretary, ICAR	Member
3. Additional Secretary & Financial Advisor (DARE/ICAR)	Member
4. Three Deputy Director Generals (for 03 years)	Members
5. Director, ICAR-NAARM, Hyderabad	Member
6. Joint Secretary (Training), DoPT, GoI,	Member
7. Assistant Director General (HRM)	Member Secretary

First meeting of first Training Board of ICAR was held on 17<sup>th</sup> May, 2018 under the Chairmanship of DG, ICAR.

## 7. Implementation of Systematic Approach to Training

The Systematic Approach to Training (SAT) is a methodology for managing training functions in the Organizations like ICAR. It is an orderly and logical approach for an end-to-end training functions and ensures that the employees are properly equipped with necessary knowledge, skills and behaviours to discharge their duties successfully. For implementation of SAT, Institutionalised System for Training & Capacity Building has been created to plan, monitor



and implement the training functions in the ICAR-Institutes/HQs. The SAT is implemented through the following four stages (Fig. 2):

1. Training Needs Analysis
2. Design and Development of Training Programmes
3. Implementation of Training Programmes
4. Monitoring and Evaluation of Training Programmes

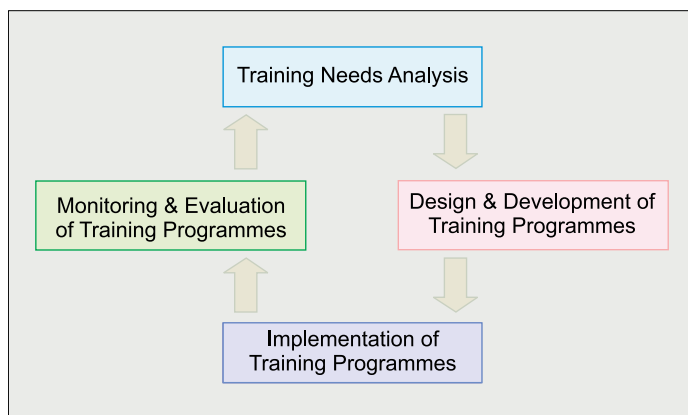


Fig. 2: Systematic Approach to Training

### 7.1 Training Needs Analysis

A training need may be defined as the gap between the actual and desired levels of performance that

can be bridged through training. Training Needs Analysis (TNA) is the first stage of the SAT. This is considered to be the most crucial stage as the further stage depends upon it. If this stage is well done, it can be considered that the training itself is half done. This is because the trainees can easily connect themselves with the actual training, when it is given to them, as the training actually addresses their training requirements. Training needs analysis is a stage, where the requirements of training are identified.

For the first time in ICAR, identification of training need of all categories of employees has been done by all the Institutes during 2015-16 and 2016-17. The Institutes have identified 253 training need areas (Annexure XI a-d) for all categories of employees (128, 55, 39 and 31 training areas for Scientific, Technical, Administrative staff including finance, and Skilled Support Staff, respectively).

Immediately after Training Needs Identification (TNI), all the ICAR-Institutes/HQs were advised to develop Annual Training Plan (ATP) for all the categories of employees keeping in mind that about 20-25% employees get opportunity during a year, particularly those employees who have not got any opportunity of training in last 3-4 years. An Annual Training Plan is a comprehensive training plan to be prepared annually by every Institutes for all the employees working in the Institute before the start of the next financial year (including those who are posted in the subordinate offices or Regional Stations/Centers), irrespective of the Category of such employees. This plan includes the training interventions described in the Cadre Training Plan (CTP) of the Cadres under its exclusive control, and also the training interventions required to develop Institute-specific-competencies in those employees who are posted in the Institution on tenure basis.





First time in ICAR, all ICAR-Institutes/HQs have been developing ATP based on TNA for all categories of employees since 2016-17. Based on ATP developed, the employees are being deputed for various kinds of training programmes either within the ICAR or outside the system.

## 7.2 Design and Development of Training Programmes

It is important to ensure that suitable training modules are identified or designed and developed to address the training needs of the employees. The content should be properly developed to impart necessary knowledge, skills and behaviours to the trainees.

Suitable training programmes for Technical Staff, Stenographer Grades, Regular Drivers, Farm Manager, Guest Incharges/Care takers, Administrative/Technical staff dealing with Court cases, Security, repair and maintenance, Master Trainers, SSS, etc. were lacking in the system as it was always emphasised to train the Scientists being a scientific R&D Organisation. Based on the identified training needs, 17 leading ICAR-Institutes including ICAR-NAARM, Hyderabad have been identified, and 04 EDP for Senior Officers, 12 specialized training programmes for Scientific staff, 02 training programmes each for Vigilance Officers, ITMU/ZTMU Incharges, and PME Cell Incharges, 08 programmes for HRD Nodal Officers, 77 specialized training programmes for Technical staff, 06 programmes for Farm Managers/Technical staff dealing with farm, 11 new training programme each for Regular Drivers and Stenographer grade staff, 17 for Administrative staff, 01 programme each for Developing Master Trainers, CJSC members, Administrative/technical staff dealing with court cases, security, repair and maintenance, 03 for Technical staff associated with Library work and 311 programmes for SSS got designed, developed and organized during 2016-20. Besides, 02 new training programmes for Guest Incharges/Caretakers were also designed, developed and organized by ICAR-NAARM, Hyderabad in collaboration with Institute of Hotel Management, Catering Technology and Applied Nutrition (IHMCT & AN), Hyderabad during 2018-20.

## 7.3 Implementation of Training Programmes

Implementation is taking the results of the development phase into the actual conducting of training. The major output of the implementation phase is trained personnel. Consequent upon designing and development of the training programmes, following training programmes have been successfully organized by competent ICAR-Institutes during 2016-20.

### 7.3.1 Training Programmes for Scientific Staff

Human Resource Development is the core activity of ICAR-NAARM, Hyderabad and organized 56 training programmes in which 1501 participants attended various capacity building programmes during 2013-14 while based on 3 years' average, number of training programmes organized were 44 and 77 during 2014-17 and 2017-20, respectively in which 1977 and 3399 trainees participated. The capacity building programmes include Foundation





Course for Agricultural Research Services (FOCARS), foundation courses for faculty of Agricultural Universities, Executive Development Programmes (EDPs), Management Development Programmes (MDPs), Refresher Course/Summer Schools/Winter Schools, need based programmes for scientists, technical/administrative staff and off-campus programmes. ICAR-NAARM also offers online programmes on competency enhancement through Massive Open Online Courses (MOOC) platform (Table 1). A comparison on HRD activities at ICAR-NAARM, Hyderabad since 2013-14 onwards is as follows.

**Table 1. Capacity Building Programmes Organized by ICAR-NAARM, Hyderabad since 2013-14**

Type of Programme	2013-14		2014-17		2017-20	
	No. of Programmes	No. of Participants	Av. no. of Programmes	Av. no. of Participants	Av. no. of Programmes	Av. no. of Participants
FOCARS (ARS Scientists)	02	228	2	240	2	129
Foundation Course (Faculty of Ag. Uni.)	00	00	1	58	4*	183*
Executive Dev. Prog. (EDP)	02	26	2	30	1*	10*
Management Dev. Prog. (MDP)	04	104	4	112	3	73
Refresher Courses/ Summer Schools	03	96	2	42	1**	25**
Need Based Programmes for Scientists/ Technical/ Adm. Staff	15	334	23	523	46	1278
Off-campus Programmes	29	699	7	271	19	558
Massive Open Online Courses (MOOC)	00	00	2***	691***	1	1143
International Programmes	01	14	1****	11****	0	0
Total	56	1501	44	1977	77	3399

\*2017-18; \*\*2018-20 (02 yrs); \*\*\*2015-17 (02 yrs); \*\*\*\* 2014-15

Based on TNI, suitable new training programmes for Scientists were designed, developed and organized during 2017-20 (Table 2). In these 12 training programmes covering 08 training need areas, 204 Scientists (155 ICAR employees + 49 Non-ICAR employees) in various grades participated. About 31% got training first time after their FOCARS training. ICAR-NIANP, Bengaluru organized an International training programme sponsored by Ministry of External Affairs, GoI of African trainees while ICAR-NIAP, New Delhi conducted a training programme for Probationers, Indian Economic Services, Ministry of Finance, GoI.


**Table 2. New Training programmes for Scientific staff based on TNA organized during 2017-20**

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after FOCARS (No.)
Advanced Remote Sensing and GIS Applications in Integrated Land Resource Management	NBSS & LUP, Nagpur	2017-18	2 weeks	1	13	3
Tools and Techniques of Analysis of Biomolecules	IARI, New Delhi	2017-18	2 weeks	1	15	5
Experimental Designs and Statistical Data Analysis	IASRI, New Delhi	2017-19	10 days	2	32	14
Advances in Simulation Modeling and Climate Change Research towards Knowledge Based Agriculture	IARI, New Delhi	2017-20	3 weeks	3	59	14
Recent Advances of Bioinformatics in Agricultural Research : A Practical Perspective	IASRI, New Delhi	2017-18 & 2019-20	2-3 weeks	2	25	9
Genomics-assisted Breeding for Crop Improvement	IARI, New Delhi	2017-18	3 weeks	1	25	5
Management of Plant Genetic Resources	NBPGR, New Delhi	2017-18	2 weeks	1	21	5
Contemporary Approaches to Plant Genetic Resources Management	NBPGR, New Delhi	2018-19	3 weeks	1	14	9
	Total			12	204	64 (31.4%)



Training of Scientific staff at ICAR-IARI, New Delhi



Training of Scientific staff at ICAR-NBPGR, New Delhi



Training of Scientific staff at ICAR-IARI, New Delhi



Training of Scientific staff at ICAR-NBSS & LUP, Nagpur



CAFT Training conducted at ICAR-CIAE, Bhopal



Short course at ICAR-CICR, Nagpur



African Trainees on field trip organized by ICAR-NIANP, Bengaluru



Training of Probationers of Indian Economic Sservices, Ministry of Finance, Gol organized by ICAR-NIAP, New Delhi

### 7.3.2. Leadership Workshops for Senior Officers

Managing of people and relationships at work place is one of the most important skills required in order to enhance organizational achievements. To develop this skill, one needs to understand the personality of one's self, others - as individuals and groups, and organizational issues impacting people at work. In the organizational context, people and relationships management has many consequences. Improper management results in the reduction of performance efficiency, effectiveness, productivity and communication of employees. When performance efficiency suffers, the quality of the overall organizational environment deteriorates. A deterioration of the organizational environment is accompanied by deterioration in organizational performance. It will have adverse impact on the individual in terms of low morale and poor work relations. People who are chronically having difficulties are lacking in energy and commitment. They may find it hard to concentrate on any one task and cannot be relied on to do their job share. Understanding people and successfully interacting with them increases organizational efficiency and effectiveness.

It was felt appropriate to reflect on and renew the people management skills of the top management personnel of ICAR/ASRB, sensitize them on human resource related issues and resolve related operational issues. Therefore, HRM Unit of ICAR headquarters in collaboration with ICAR-NAARM, Hyderabad organized six one day leadership workshops on "Enhancing organizational productivity through management of people at work" for Top Officials right from Deputy Director Generals; Asstt. Director Generals; Directors, Joint Director, Professors, Principal Scientists and Heads of Division of ICAR-Institutes located at Delhi; Deputy Directors, Senior Finance & Accounts Officers, Deputy Secretaries and Directors at headquarters and ASRB. In these workshops, 95 such officers participated.





Leadership Workshop at NASC, New Delhi



Leadership Workshop at NASC, New Delhi

### 7.3.3. New Executive Development Programmes for Senior Officers with International Exposure

Training and Capacity building is essential for improving efficiency and effectiveness of the individuals even for Senior Officers, consequently leading to overall efficiency and effectiveness of the organization and its development and success. Organizational effectiveness is enhanced through enhancement of managerial competence and skill development of the Officer. Wider exposure enhances leadership capacities, competence and skills to improve the organizational efficiency to harness the power of science and innovation for food security, food safety and farmer prosperity under diverse environments of the globe. Therefore, visits to research production and processing facilities and government departments for gaining insights on good practices in agriculture and allied disciplines in other countries has good sense.

In other Central Government Organizations, the Executive Officers get an opportunity of training in India and abroad. Similar types of opportunities were not available to the Senior Officer of ICAR. First time, International exposure visits of multidisciplinary Senior Scientific and Administrative staff together was organized as part of “Senior Executive Development Programme on Developing Effective Organisational Leadership for Senior Officers of ICAR” by ASCI, Hyderabad in coordination with ICAR-NAARM, Hyderabad and HRM Unit, ICAR HQs. The programme was envisaged to enhance leadership capacities, competence, and skills of senior research managers and officers to improve the organizational efficiency. Overall, 20 Senior Officers in 02 batches with In-country component (ASCI, Hyderabad) and International Component (China, Malaysia and Thailand (15-24 April, 2018)/Singapore, Australia and New Zealand (19-29 May, 2018) participated during 2017-18 (Table 3). Based on the feedback of the participants, an updated EDP was organized during 2019-20 in which 45 Seniors Officers in 02 batches with both In-country (ASCI, Hyderabad) and International components (Netherlands, Belgium, Germany & Switzerland) participated (Table 4).



**Table 3. New Executive Development Programme for Senior Officers with International Exposure during 2017-18**

S. No	Training Programme	Organizing Institute	Duration	Participants (No.)
1	Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-I (Domestic component)	ASCI, Hyderabad in coordination with NAARM, Hyderabad and HRM Unit, ICAR HQs	28 March-01 April, 2018	10
2	Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-II (Domestic component)		09-13 April, 2018	10
3	Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-I (International component: China, Malaysia & Thailand)		15-24 April, 2018	10
4	Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-II (International component: Singapore, Australia & New Zealand)		19-29 May, 2018	10
	Total			20*

\*Total no. of participants were 20 as same participants undergone in Domestic and International components

**Table 4. Executive Development Programme for Senior Officers with International Exposure during 2019-20**

S. No	Training Programme	Organizing Institute	Duration	Participants (No.)
1	Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-I (Domestic component)	ASCI, Hyderabad in coordination with NAARM, Hyderabad and HRM Unit, ICAR HQs	2-4 August, 2019	19
2	Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-II (Domestic component)		9-11 August, 2019	26
3	Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-I (International component: Netherlands, Belgium, Germany & Switzerland)		21-30 September, 2019	23
4	Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR-Batch-II (International component: Netherlands, Belgium, Germany & Switzerland)		12-21 October, 2019	22
	Total			45*

\*Total no. of participants were 45 as same participants undergone in Domestic and International components



During 2017-18, through In-country programme at ASCI, Hyderabad, participants could be able to learn essentials of leadership, characteristics of effective leaders; performance management; dynamics of team building; emotional intelligence and leadership; transactional leadership; role of interpersonal skills; essentials of communication; strategy management; time management; dynamics of administration, etc. After having exposure visits to China, Malaysia and Thailand, participants realized that Modern Agriculture Technology Park can be replicated in and around metros of India to create value chain; Soilless medium can be effectively utilized for enhancing productivity, profitability & diversity; Application of good agricultural practices in India; New dimensions of Agri-innovation in vertical farming of crops like Sweet Potato, Eco-office & park, hydroponics can be explored; Taking protected cultivation of vegetables & flowers to next level; Developing competitive & comprehensive system of farming (Farmer-Govt.-Private Sector); Developing the concept of Plant factories to make it effective; Effective IP management & commercialization; Linking research to commercial application; Effective value addition of products for profit maximization; Effective delegation of role & responsibilities for organizational effectiveness; Systematization and effective management of work; Effective resource management; Effective time management; Respect for Labour & person; Developing entrepreneurship to establish a successful enterprise of par excellence, etc.

After having exposure visits to Singapore, Australia and New Zealand, participants learnt about efficient use of land resources; rehabilitation of land from sea; greening the country; plant residue recycling; conserving natural resources; multiple uses of ports, etc. in Singapore. They had the opportunity of learning at Australian Centre for Field Robotics, Protected Agriculture and Climate Resilient Agricultural Facilities, Climate Controlled Chamber for Tree Studies, Ecosystem Services, Hi-tech Abattoir of Southern Meats Pty Ltd., Mazamat, Australian Centre for International Agricultural Research (ACIAR), Fern Hill Park, and Large Dairy Farm at Palmerston North. The participants opined that the research collaboration in Agricultural Engineering with respect to Artificial Intelligence application can be done with the University of Sydney; ICAR Institutes / State Agricultural Universities (SAUs) may take up Joint Ph.D. Programmes in protected agriculture, precision agriculture, climate change situation in silviculture, silvipastoral, soil studies areas at Western Sydney University; ICAR may have collaborative competitive research grant proposals with Australian Research Council; linking research Institutions with certification agencies, industry and Government regulatory agencies for studies on traceability and standards as per SPS and TBI agreements; establishing a global agriculture market intelligence unit in ICAR; creating a bio-security cell at ICAR to link research institutes with industry, famers' bodies and regulatory bodies, etc.

Overall feedback of the participants was that the programme was very useful and relevant. International exposure provided a platform for multi-disciplinary discussions for subject updates and opportunities to understand good agricultural practices prevailing in other countries. Besides, participants learnt about the organizational structure, behaviour and work culture of successful organizations beyond the borders which have greater significance with reference to

advancement in frontier areas in Science, Technology and Innovations. This would certainly improve the managerial and leadership qualities to work more effectively and efficiently.

Based on new learning and understanding, ICAR has been able to take initiatives for advancement of agricultural technologies viz., Vertical farming including aeroponics for improving nutritional security and providing safe vegetable production systems for urban population; Standardized bottle technology for growing mushroom (*Flamulina* spp.) at ICAR-DMR, Solan; Formulated and executed new research programmes like use of LED, Overhead production of growing sweet potato and vertical farming in spices and flower crops; introducing artificial intelligence and precision agriculture in the Institutes' research programmes, etc. Besides, strengthening of mechanisms for developing partnerships for value addition/diversification and building of value chains in technologies developed through research are the other areas where the best international practices find place in ICAR system.



Participants visiting CAAS, Beijing  
(Batch-I; 2017-18)



Participants visiting Australian Centre for Field Robotics,  
University of Sydney, Sydney  
(Batch-II; 2017-18)

During 2019-20, through In-country programme at ASCI, Hyderabad, the participants could be able to learn transformational leadership, negotiation as a leadership tool, effective Governance, leadership essentials for research, opportunities for integration of education in lower rungs of society, operating system for innovation, ethics and values in the public administration, artificial intelligence, team building, emotional intelligence and leadership, collaborative leadership, happiness and well-being, climate change in agriculture, etc. The major feedbacks of the participants after International exposure visits were: Farmer-Scientist-Industry collaboration needs special focus for sustainable development; Building partnership for resource use efficiency; Climate smart agriculture, use of robotics and artificial intelligence in agriculture and organic agriculture need special attention. Research projects on intensification and scaling up of high value crops and protected cultivation in India may be emphasized, Promotion of supply and value chains to provide better incomes to the farmers, processors and stakeholders,





Participants visiting University of Bonn, Germany  
(Batch-1; 2019-20)



Participants visiting Research Institute of Organic  
Agriculture, Frick, Switzerland (Batch-2; 2019-20)

Farmers participation in research and promotion of farmers' innovation could be facilitated. Research Institutes must undertake research based on market intelligence to suggest suitable crops/systems to farmers for higher profitability and income; Creating precision farming opportunities and use of sensors/artificial intelligence for improved productivity/efficiency. There is scope for creating/facilitating opportunities for Indian scientists for scientific/academic exchange and make use of channels including EU competitive grants; looking for collaborative partnerships with Wageningen, Ghent and Bonn University in various areas of Agriculture, Horticulture, NRM, Engineering, Animal, Fisheries & Social Sciences & with FIBL, Switzerland on different aspects related to development of production technologies and the promotion of organic farming practices, etc.

#### 7.3.4 New Competency Development/Enhancement Programmes for HRD Nodal Officers

The Human Resource Development activities of ICAR-Institutes/HQs are being implemented by HRD Nodal Officers who handle HR activities including various training functions at their respective Institutes/HQs. ICAR plans for competency development and enhancement of these HRD Nodal Officers for effective coordination, implementation, monitoring and evaluation of trainings at the Institute level. To implement the training functions in the Institutes/HQs effectively and efficiently, eight Competency Enhancement Programmes/Management Development Programmes on "Effective Implementation of Training Functions by HRD Nodal Officers of ICAR" were organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs in which almost all the HRD Nodal Officers have been trained.

The Nodal Officers were exposed to learn various training functions including developing a System of training in the Institute/HQs; pursuing Systematic Approach to Training; performing Training Needs Analysis (TNA) of all categories of employees; developing Annual Training Plan (ATP) based on TNA; Evaluation of Trainings; Monitoring and Impact Assessment of trainings attended; and Maintaining Database of training and trained manpower, etc.



Competency Enhancement Programme for HRD Nodal Officers at ICAR-NAARM, Hyderabad

### 7.3.5. New Training Workshop for Vigilance Officers

Since most of the Vigilance Officers of ICAR-Institutes are Scientists who do not have required competency and confidence to handle vigilance and disciplinary cases, therefore, a two days Training Workshops for Vigilance Officers of ICAR has been designed, developed and organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2018-20. This programme covers constitutional provisions relating to disciplinary proceedings, role of CVO, misconduct and remedial action, preliminary investigation, drafting of charge sheet, conduct of inquiry, drafting of inquiry report, action on inquiry report, etc. In the said workshops, 67 Vigilance Officers of 67 Institutes participated in 02 batches, all the participants attended such kind of training first time after taking over the charge of Vigilance Officer.

### 7.3.6 Training Programme for ITMU/ZTMU Incharges

A training programme on “IP Valuation and Technology Management” was organized by ICAR-NAARM, Hyderabad during 2018-20 for ITMU/ZTMU Incharges of ICAR-Institutes. In the said programmes, 44 ITMU/ZTMU Incharges participated in 02 batches, all the participants attended such kind of training first time after taking over the charge of ITMU/ZTMU Incharges.

### 7.3.7 Training Programme for PME Cell Incharges

To acquaint the PME Cell Incharges of ICAR-Institutes with the techniques for Research Prioritization, Monitoring and Evaluation, six days MDPs on “Priority Setting, Monitoring and Evaluation (PME) of Agricultural Research Projects” for PME Cell Incharges of ICAR was organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2018-20. In the said MDPs, 64 PME Cell Incharges of 64 Institutes participated. About 97 per cent PME Cell Incharges participated first time in such type of training.

### 7.3.8 New Training Programmes for Technical Staff

Technical staff play a pivotal role in extending research support in the organization. Services offered by the Technical staff help in planning and coordinating the management aspect of



Workshop for Vigilance Officers at  
ICAR-NAARM, Hyderabad



Training Programme for PME Cell Incharges at  
ICAR-NAARM, Hyderabad

research which in turn help in meeting the goals and improve productivity of the research organization. The Training Programmes are intended to build the capacity of Technical staff through appropriate modes.

Specialized Training Programmes for the Technical staff were tremendously lacking in the system and they had very limited opportunity of capacity building in ICAR. Therefore, for the first time, 77 Specialized Training Programmes were organized based on identified 48 Training Needs through 17 leading ICAR-Institutes in coordination with HRM Unit, ICAR HQs during 2016-20 (Table 5). In these programmes, so far 1462 Technical staff (1405 ICAR employees + 57 Non-ICAR employees) participated, out of which about 38.9% Technical staff got first time opportunity after joining ICAR service.

**Table 5. New Training Programmes organized for Technical staff based on TNA during 2016-20**

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR service (No.)
Competence Enhancement Programme on Soft Skills and Personality Development	NAARM, Hyderabad	2016-18	10 days	2	70	20
Computer Applications	IASRI, New Delhi	2016-18	1 week	2	44	12
Basic Training on Routine Chemical Analysis	NDRI, Karnal	2016-18	1 week	2	31	15
Networking: Basics and Management	IASRI, New Delhi	2016-18	1 week	2	45	11



<b>Title of Training Programme</b>	<b>Organizing Institute</b>	<b>Year</b>	<b>Duration</b>	<b>No. of Prog.</b>	<b>Participants (No.)</b>	<b>Participants attended first time after joining ICAR service (No.)</b>
Agrometeorological Data Collection, Analysis and Management	CRIDA, Hyderabad	2016-18	2 weeks	2	32	17
Food Processing, Packaging and Value Addition of Agricultural and Livestock Produce	CIPHET, Ludhiana	2016-17	2 weeks	1	19	9
Microbial Culture Handling and Maintenance	NBAIM, Mau	2016-17	10 days	1	16	7
Use and Maintenance of Advanced Instruments in Soil and Plant Analysis	IISS, Bhopal	2016-18	1 week	2	33	16
Selection, Adjustment, Operation and Maintenance of Agricultural Implements for Field and Horticultural Crops	CIAE, Bhopal	2016-19	10-14 days	3	71	39
Competence Enhancement Programme on Motivation and Positive Thinking	NAARM, Hyderabad	2016-18	10 days	3	114	40
Experimental Data Analysis	IASRI, New Delhi	2016-18	2 weeks	2	39	12
Handling and Care of Laboratory Animals	NDRI, Karnal	2016-17	1 week	1	11	7
Dairy Farm and Milk Processing Plant Management	NDRI SRS, Bengaluru	2016-17	1 week	1	10	0
Application of Remote Sensing and GIS in Natural Resource Management	IISWC, Dehradun	2016-18	10 days	2	31	2
Principles and Production Techniques of Hybrid Seed in Vegetables	IIVR, Varanasi	2016-18	2 weeks	2	39	13



Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR service (No.)
Cyber Security	IASRI, New Delhi	2016-17	1 week	1	23	2
Good Laboratory Practices in Animal Science	SRS-NDRI, Bengaluru	2016-17	1 week	1	14	4
Statistical Techniques for Agricultural Data Analysis	IASRI, New Delhi	2016-18	10 days	2	35	14
Techniques in Microbiology	NBAIM, Mau	2016-17	2 weeks	1	10	0
Introduction to Bioinformatics	IASRI, New Delhi	2016-17	2 weeks	1	15	6
Principles of Seed Production, Processing, Storage and Quality Assurance	IISS, Mau	2016-17	10 days	1	15	8
Good Laboratory Practices in Fisheries Science	CIFE, Mumbai	2016-17	1 week	1	9	0
Identification of Insect Pests / Vectors / their Damaging Symptoms and Management	IARI, New Delhi	2016-18	2 weeks	2	34	13
Operation and Maintenance of Improved Implements and Machinery	CIAE, Bhopal	2016-17	1 week	1	16	12
Reproductive Health Management of Dairy Animals	NDRI, Karnal	2016-17	1 week	1	10	5
Fundamental Concepts and Methodologies for Agricultural Water Management	IARI, New Delhi	2016-18	1 week	2	46	24
Precision Agriculture Technologies	IARI, New Delhi	2016-18	1 week	2	37	7



<b>Title of Training Programme</b>	<b>Organizing Institute</b>	<b>Year</b>	<b>Duration</b>	<b>No. of Prog.</b>	<b>Participants (No.)</b>	<b>Participants attended first time after joining ICAR service (No.)</b>
Physiological Techniques to Analyze the Impact of Climate Change on Crop Plants	IARI, New Delhi	2016-17	10 days	1	14	2
Use of Different Molecular Biology Techniques in Crop Improvement Programme	NRCPB, New Delhi	2016-17	2 weeks	1	14	4
Handling, Maintenance of Lab and Field Equipments in Fisheries Science	CIFE, Mumbai	2016-17	2 weeks	1	12	12
Trace Level Analysis of Pesticides, Phytochemicals, Sugars and Organic acids	IARI, New Delhi	2016-17	1 week	1	15	2
Precision Instrumentation in Dairy Research and Food Quality Evaluation	SRS-NDRI, Bengaluru	2016-17	1 week	1	8	1
Appropriate Sampling Techniques Including Sample Preparation and Preservation for Soil, Water, Plant and Air Samples for Various Analyses	IARI, New Delhi	2016-17	1 week	1	17	5
Instrumentation Techniques for Analysis of Soil, Plant and Water	IARI, New Delhi	2016-18	10 days	2	38	7
Good Agricultural Practices (GAPs) for Enhancing Resource-Use Efficiency and Farm Productivity	IARI, New Delhi	2016-20	2 weeks	4	97	46
Web-designing, Development and Maintenance using Open Source Software	IASRI, New Delhi	2016-17	2 weeks	1	13	0
Commercial Dairy Production	SRS-NDRI, Bengaluru	2016-17	1 week	1	6	3





Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR service (No.)
Technology Management and Business Planning for Entrepreneurship Development	SRS-NDRI, Bengaluru	2016-17	1 week	1	7	0
Layout and Maintenance of Field Experiments and Recording Observations	IARI, New Delhi	2016-18 & 2019-20	10 days	3	50	33
ICAR-ERP	IASRI, New Delhi	2016-20	1 week	4	75	37
FCV Tobacco Field Crop Management	CTRI, Rajahmundry	2017-18	1 week	1	25	25
Basic Microbiological Techniques for Studying Microbes	IARI, New Delhi	2017-18	8 days	1	16	2
Microbiological Examination of Seafood	CIFT, Cochin	2017-18	1 week	1	21	7
Hi-tech Propagation and Nursery Management for Production of Quality Planting Material	IIHR, Bengaluru	2017-18	10 days	1	10	8
Communication and Scientific Writing for Technical Officers	NAARM, Hyderabad	2017-18	1 week	1	13	0
CEP on Motivation, Positive Thinking and Communication Skills	NAARM, Hyderabad as Off-campus at CIAE Bhopal/ IISWC, Dehradun	2018-19	1 week	4	113	45
Enhancing Personal Effectiveness at Workplace	IARI, New Delhi	2018-19	1 week	1	21	06
E-governance application at ICAR	IASRI, New Delhi	2019-20	5 days	1	08	08*
Total				77	1462	568 (38.9%)

\*Such kind of programme



### 7.3.9 New Training Programme for Farm Manager

Based on the TNA, a new training programme on “Farm Management” was designed, developed and organized by IIFSR, Modipuram in coordination with HRM Unit, ICAR HQs during 2016-20 for the Technical staff associated with farm/Farm Manager. So far, 145 Technical staff associated with farm/Farm Manager (129 ICAR employees + 16 Non-ICAR employees) undergone training in 06 batches, out of which 23.5% got first time opportunity after joining service.

### 7.3.10 New Training Programme for Regular Drivers (Tech. Gr.)

Training programme for Regular Drivers in Technical grades in ICAR was not existing and even it was never thought earlier to have a proper training programme for this group of employees. Besides, automobile maintenance has been identified as one of the important training area for this category of staff. Further, they are not well versed with the latest skills for automobile maintenance, road safety as well as other related soft skills. Most of the employees in this category did not undergo any suitable training after their joining the ICAR services. Keeping this in mind, for the first time a new training programme “Automobile Maintenance, Road Safety and Behavioural Skills” was designed, developed and organized by ICAR-CIAE, Bhopal in coordination with HRM Unit, ICAR HQs during 2016-17 (Table 6).

A total 310 Regular Drivers undergone training in 11 Batches during 2016-20, out of which about 90% Drivers got first time opportunity after joining ICAR service. Such Programmes have been appreciated by DoPT. The Drivers were so happy that they collectively facilitated the Director, ICAR-CIAE and others who were associated with the organization of the programme.

**Table 6. New Training Programmes organized for Regular Drivers based on TNA**

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR Service (No.)*
Automobile Maintenance, Road Safety and Behavioural Skills	CIAE, Bhopal	2016-17	5 days	02	37	32 (86)
		2017-18	5 days	03	87	80 (92)
Automobile Maintenance, Road Safety and Behavioural Skills (Updated)		2018-19	1 week	03	93	82 (88)
		2019-20	1 week	03	93	85 (91)
Total					310	270 (90)

\* Figures in parenthesis represent per cent Drivers attended training first time after joining ICAR service



### 7.3.11 Training Programme for Technical Staff associated with Library

Based on TNA, ICAR-NAARM, Hyderabad designed, developed and organized a training programme on KOHA for Technical staff working in various ICAR Institutes/HQs that are associated with Library work in coordination with HRM Unit, ICAR HQs. During 2017-20, 92 Technical staff (88 from ICAR Institutes and 04 from SAUs) were trained in 03 batches, out of which 87% attended first time after joining service.

### 7.3.12 New Training Programme for Guest House Incharges/Caretakers

Normally, the Govt. Guest Houses are used by all levels of Officers visiting the Organization/Institution for official business. These Guest Houses are usually maintained by untrained Scientific/Technical/Administrative staff, consequently leading to inefficient management of the Guest Houses with unintentional poor reflection of the Organization. To have better sense of hospitality and effective management of Guest Houses, it was realized to train Guest House Incharges/Caretakers of ICAR Guest Houses in collaboration with specialized Training Institutes. Therefore first time, a specialized training programme for Guest House Incharges/Caretakers on “Hospitality Management” in collaboration with Institute of Hotel Management, Catering Technology & Applied Nutrition (IHMCT & AN), Hyderabad was designed, developed and organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2018-20. In these training programmes, 50 Guest House Incharges/Caretakers of 50 ICAR-Institutes participated, out of which 94% attended first time after joining ICAR service.



Training Programme on Hospitality Management

### 7.3.13 New Trainers Development Programme

To support ICAR-NAARM and other ICAR-Institutes for organizing various training programmes for Administrative and Finance staff, a specialized Trainers Development Programme for Developing Masters' Trainers in ICAR was designed, developed and organized by ICAR-NAARM, Hyderabad in coordination with Administration Section and HRM Unit, ICAR HQs during 4 to 9 December 2019 for the first time. In this training programme, 22 Administrative and Finance staff participated, out of which 100% attended first time such type of training after joining ICAR service. During the training, specialized areas of each trainer were identified so as to recognize them in different sectoral and functional areas for imparting training. After successful completion of the programme, the list of Master Trainer with specialized area was circulated to all ICAR-Institutes to take their services (Annexure- XII).



Trainers Development Programme at ICAR-NAARM, Hyderabad



Training for staff dealing with Security or Security Officer at ICAR-CPRI, Shimla

### 7.3.14 New Training Programme for staff dealing with Security or Security Officer

For the first time, a “Capacity Building Programme for a Secure & Resilient Workplace at ICAR” was designed, developed and organized by ICAR-CPRI Shimla in coordination with HRM Unit, ICAR HQs during 25-27 November 2019. In this programme, 33 Technical and Administrative staff of 26 ICAR-Institutes dealing with Security or Security Officers participated, out of which, all attended first time such type of programme.

### 7.3.15 New Training Programme for Administrative Staff dealing with Court Cases

For the first time, a training programme on “Improving Skills of Administrative Staff of ICAR dealing with Court Cases” was designed, developed and organized by ICAR-CAZRI, Jodhpur in coordination with Legal Cell and HRM Unit, ICAR HQs during 25-27 November 2019. In this programme, 18 Administrative staff dealing with court cases participated, out of which, all attended first time such type of programme.



Training for administrative staff dealing with Court Cases at ICAR-CAZRI, Jodhpur



Training for staff associated with Works/Estate/Building Maintenance at ICAR-CIAE, Bhopal

### 7.3.16 New Training Programme for Staff associated with Works/Estate/Building Maintenance

For the first time, a training programme on “Repair and Maintenance of Office, and Residential Building including Guest Houses” was designed, developed and organized by ICAR-CIAE, Bhopal in coordination with Works/Engineering Cell and HRM Unit, ICAR HQs during 21-23 January, 2020 in which 29 Administrative/Technical staff associated with Works/Estate/Building Maintenance participated. Out of which, all attended first time such type of training and about 31% attended first time any training programme after joining ICAR service.

### 7.3.17 New Training programme on Assets Management

Suitable training programme for Administrative including Finance staff dealing with Assets management in ICAR was lacking in the system and badly needed. Therefore, for the first time,



Training for administrative staff dealing with Assets Management at ICAR-IARI, New Delhi



a new training programme on “Assets Management” was designed, developed and organized by ICAR-IARI, New Delhi in coordination with Finance Division and HRM Unit, ICAR HQs during 04-08 November, 2019 in which 28 administrative including finance category of staff participated. Out of which, all attended first time such type of training and about 32% attended first time any training programme after joining ICAR service.

### 7.3.18 New Capacity Building Programme for CJSC Members

For the first time, a Capacity Building Programme for CJSC members was designed, developed and organized by ICAR-NAARM, Hyderabad during 27-31 January, 2020 in which 89 CJSC Members of ICAR Institutes/HQs participated. All the CJSC member participated first time in such kind of training programme after elected as CJSC member.

### 7.3.19 New Training Programme for Stenographer Grades

To improve skills and efficiency in discharging functions and providing constructive support in meeting the organizational goals and targets, specialized training programme for Stenographer Grade –III, PA, PS and PPS in the ICAR system was lacking and they had very limited opportunity of capacity building. Therefore, for the first time, a new training programme “Enhancing Efficiency and Behavioural Skills” was developed and organized by ICAR-NAARM, Hyderabad in coordination with HRM Unit, ICAR HQs during 2016-20 (Table 7). So far, 331 Stenographers in various grades were trained in 11 batches, out of which about 81% got training first time after joining ICAR service.

**Table 7. Training programmes organized for Stenographer Grades based on TNA during 2016-20**

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR Service (No.)
Enhancing Efficiency and Behavioural Skills of Stenographers, PA,PS and PPS	NAARM, Hyderabad	2016-17	1 week	03	99	62 (62)
	NAARM, Hyderabad; CIFE, Mumbai (Off campus by NAARM); NBSS & LUP, RC, Kolkata (Off campus by NAARM)	2017-18	1 week	03	94	73 (78)

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR Service (No.)
	NAARM, Hyderabad; CIFE, Mumbai (Off campus by NAARM); NBSS & LUP, RC, Kolkata (Off campus by NAARM)	2018-19	1 week	03	75	71 (95)
	CPRI, Shimla (Off campus by NAARM) and NAARM, Hyderabad	2019-20	1 week	02	65	65 (100)
Total					333	271 (81)

\* Figures in parenthesis represent per cent Stenographers attended training first time after joining ICAR service



Training of Stenographer grades at ICAR-NAARM, Hyderabad



Training of Stenographer grades at ICAR-NBSS & LUP RC, Kolkata (Off campus by ICAR-NAARM Hyderabad)



Training of Stenographer grades at NAARM, Hyderabad

### 7.3.20 Customised Training Programmes for Administrative Staff

The Officers in the administrative and finance need to be oriented to take up new challenges and assignments. In the recent past, there have been changes and amendments in the rules and government policies with reference to establishment rules, GFR, etc. Customized training programmes provide an opportunity for the officers of combined cadre of ICAR for mutual interaction and knowledge sharing among them and sharpen the administrative and financial skills to discharge their day to day responsibilities more effectively and efficiently on Establishment Rules, Pension and other Retirement Benefits, Pay Fixation, Reservation in Services for SC/ST/OBC, Ethics and Values in Public Governance, E-Procurement/Purchase Management in Government, E-office, ERP system, Good Governance and sustainability through HR Practices, Leadership and Performance Management, Communication skills for Manager, Technical Service Rules, etc.

Based on the training need identification, customized training programmes were organized by competent ICAR-Institutes. So far 418 Administrative staff including finance undergone in 16 trainings during 2017-20, out of which about 72.7% undergone training first time or such kind of training programme after joining service (Table 8).

**Table 8. Training Programmes organized for Administrative and Finance Staff based on TNA during 2017-20**

Title of Training Programme	Organizing Institute	Year	Duration	No. of Prog.	Participants (No.)	Participants attended first time after joining ICAR Service (No.)
Refresher Course on Administration and Finance Management for Section Officers, AAOs, JAOs, AFAOs and Assistants of ICAR	NAARM, Hyderabad and as off-campus at CIFT, Cochin and CIFT, Cochin	2017-18 and 2019-20	05 days - 1 week	4	158	134
Establishment and Financial Matters for Under Secretaries, SAOs, SFAOs, AOs & FAOs of ICAR	NAARM, Hyderabad	2017-18	1 week	2	33	29
ICAR-ERP	IASRI, New Delhi	2017-19	1 week	2	32	13
MDP on Administrative & Financial Management for DS/ CAO/CFO/SAO/ US/SFAO	NAARM, Hyderabad and as off-campus at IASRI, New Delhi and NDRI, Karnal	2018-20	4 days	3	55	21*
Establishment and financial matters for Assistants/ AAOs/ AOs/ JAO/ AF &AO/ SO of ICAR	As Off campus by NAARM, Hyderabad at CPRI, Shimla; CCARI, Goa; and NIASM, Baramati	2018-19	1 week	3	84	51
E-governance application at ICAR	IASRI, New Delhi	2019-20	5 days	1	16	16*
Establishment Matters for LDCs & UDC	CIFE, Mumbai	2019-20	1 week	1	40	40
<b>Total</b>				<b>16</b>	<b>418</b>	<b>304** (72.7%)</b>

\*Such type of Programme; \*\*Figures in parenthesis represent per cent Administrative staff attended training first time after joining ICAR service or such kind of training programme



Training for Assistants/AOs/JAOs/AF&AOs/SOs at ICAR-CCARI, Goa



Training for Assistants/AOs/JAOs/AF&AOs/SOs at ICAR-NIARM, Baramati



Training for LDCs and UDCs at ICAR-CIFE, Mumbai



Training for Technical and Administrative staff at ICAR-IASRI, New Delhi

In addition to above, to improve skills and efficiency of Assistants/UDCs of ICAR in discharging functions and providing constructive administrative and technical support in meeting the organizational goals and targets, two Training Programmes on “Establishment and Financial Matters” were organized by ICAR-NAARM, Hyderabad during 2016-17 in which 67 officials participated.

### 7.3.21 Training Programme on Reservation in Service

One Training Programme on “Reservation in Service including Reservation Roster and Reservation Register” was organized by ICAR-NAARM, Hyderabad during 2016-17 in which 30 officials of ICAR participated.

### 7.3.22 Specialized Off-Campus Capacity Building Programme

Specialized Off-Campus Capacity Building Programme for the combined group of Scientists, Technical and Administrative personnel of DRWA, Bhubaneswar was organized by ICAR-NAARM, Hyderabad in which 26 officials participated.



### 7.3.23 Training Programmes for Skilled Support Staff (SSS)

This is the category of staff which perform the duties at the grassroot level like field operations; assist in laboratory works; physical maintenance of records; general cleanliness and upkeep of the Section/Unit/Institutes; carrying files and other papers within and outside the building; photocopying; sending FAX; other non-clerical work like diary, dispatch, dak delivery; watch and ward duties, opening and closing the office; any other work assigned by the superior authority, etc. Earlier it was even not thought to provide any sort of training to such category of staff which provide the base for moving the ICAR system forward year after year. Immediately after creation of the HRM Unit, emphasis was given for training need assessment of all the categories of staff including Skilled Support Staff (SSS). All the ICAR Institutes identified the training needs of SSS during 2015-16 which were updated during 2016-17. Thirty-one training need areas emerged for such categories of staff, which is difficult to visualize. Institutes were directed to arrange training programmes in the Institute itself based on TNI and so far 311 training programmes have been conducted in which 2852 Skilled Support Staff have been trained since 2014. The feedback received from various Institutes is as follows:

1. SSS are doing their job sincerely and timely with great dedication.
2. SSS are feeling themselves as a part of ICAR system and never thought that ICAR will provide such a nice opportunity to them to sit in the conference/seminar halls for getting training.



Training of SSS of ICAR-CIAE, IISS and NIHSAD, Bhopal



Training of SSS of ICAR-NRCY, Dirang



Training of SSS of ICAR-NDRI, Karnal



Training of SSS of ICAR-VPKAS, Almora

### 7.3.24. Field/Exposure Visit of SSS

It was realized at the Council that there should be a field/exposure visit of Skilled Support Staff (SSS) category who have even never visited other ICAR-Institutes in the same State. Since the training of this category is normally organized in the same ICAR-Institute, therefore, they do not have chance to visit other ICAR-Institutes. Keeping this in view, the Competent Authority permitted all the ICAR-Institutes/HQs to include 1-2 days Field/Exposure visit of SSS to the ICAR-Institutes within the same State or nearby state in case of Delhi and NE states as an integral part of the training programme. Following ICAR-Institutes/HQs had organized Field/Exposure visit of 526 SSS to the ICAR-Institute(s) during 2018-20 (Table 9).

**Table 9. ICAR-Institutes/HQs organized field/exposure visit of SSS during 2018-20**

Institute	Institute(s) visited	SSS (No.)
CAZRI, Jodhpur	NRC on Seed Spices, Ajmer	25
NBAIM, Mau	IIVR, Varanasi	08
CIFRI, Barrackpore	CSSRI, RS, Canning; NDRI RS, Kalyani; CIFA RC, Kalyani	27
NIVEDI, Bengaluru	NIANP, Bengaluru	03
CICR, Nagpur	CCRI, Nagpur; Ginning Training Centre, Nagpur, CIRCOT, Mumbai	29
NDRI, Karnal	Ext Edu Institute, Nilokheri; Farm of Progressive Farmer Padamshri Sh. Sultan Singh	30
IISR, Indore	CIAE, Bhopal; IISS, Bhopal; NIHSAD, Bhopal	17
ICAR HQs, New Delhi	IISR, Lucknow; CISH, Lucknow; NBFGR, Lucknow; KVK, Lucknow	38
DRMR, Bharatpur	RARI, Jaipur; SKNAU, Jobner; NRC on Seed Spices, Ajmer; KVK, Ajmer	04
CICR, Nagpur	Central Citrus Research Institute, Nagpur; Ginning Training Centre, Nagpur; KVK, Selsura, Wardha; Mahatma Gandhi Ashram, Sevagram	29
CTRI, Rajahmundry	IIOPR, Pedavegi	24
IIRR, Hyderabad	IIR, Hyderabad	7
NBPGR, New Delhi	NBAGR, Karnal	30
CIAH, Bikaner	SK Rajasthan Agriculture University, Bikaner; CAZRI, Regional Research Station, Bikaner; CSWRI Arid Region Centre, Bikaner; NRC on Camel, Bikaner; NRC on EPC RS, Bikaner	4
CPCRI, Kasargod	DCR, Puttur	10
CPRI, Shimla	IISWC, Regional Centre, Agra	30
DMR, Solan	CPRI, Shimla; NBPGR, Regional Centre, Shimla; IARI-Regional Centre, Shimla	3
IIHR, Bengaluru	CRS, Indian Institute of Spice Research, Appangala, Lodagu; CHES, Chettali	57



Institute	Institute(s) visited	SSS (No.)
IIOPR, Pedavegi	IIRR, Hyderabad; IIOR, Hyderabad	4
IISR, Kozhikode	CPCRI, Kasargod	1
NRC for Orchids, Pakyong	ICAR RC for NEH Region, Umiam, Barapani; Central Potato Research Station, Upper Shillong; National Research Centre on Pig, Guwahati	6
CSSRI, Karnal	IISWC, Regional Centre, Chandigarh; IISWC, Regional Centre Research Farm, Sukhomajri, Pinjore	32
NINFET, Kolkata	CRIJAF, Barrackpore	18
NAARM, Hyderabad	KVK, Yagantipally, Banganpally Mandal, Kurnool; KVK, Reddipalli, Anantapur	23
DKMA, New Delhi	NBPGR, New Delhi	3
CARI, Izatnagar	IIPR, Kanpur; CARI, Regional Center, Bhubaneswar	11
CIRC, Meerut	Deep Frozen Semen Station, Hapur	2
CSWRI, Avikanagar	CIAH, Bikaner; NRC on Camel, Bikaner; NRC on Equines, Bikaner; CSWRI Arid Regional Campus, Bikaner	21
NRC on Pig, Guwahati	College of Veterinary Science, AAU, Khanapara	1
CIFRI, Barrackpore	NIANP, Bengaluru; ICAR RC for NEH Region, Umiam, Barapani; DMAPR, Anand	11
NBFGRI, Lucknow	A.Q. Fisheries & Agricultural Farm (High Density Aqua Culture Unit) & Organic Farming, Bandhia, Barabanki; NBFGRI ARTU Unit, Chinhat	18
	<b>Total</b>	<b>526</b>



Visit of SSS of ICAR HQs at ICAR-IISR, Lucknow



Visit of SSS of ICAR-NBPGR, New Delhi at ICAR-NBAGR, Karnal





Visit of SSS of ICAR-NBFGR, Lucknow at A.Q. Fisheries & Agricultural Farm, Bandhia, Barabanki



Visit of SSS of ICAR-CSSRI, Karnal at ICAR-IISWC, Regional Centre Research Farm, Sukhomajri (Pinjore)



Visit of SSS of ICAR-CSWRI, ARC, Bikaner to ICAR-NRC on Equines RC, Bikaner



Visit of SSS of ICAR-CICR, Nagpur to KVK, Selsura, Wardha

### 7.3.25 In-house Training of ICAR HQs Employees

To effectively utilise the services of the competent administrative and finance officers posted at ICAR HQs to train those officials who have doubts or lack of knowledge to deal particular type of files/cases, first time weekly (one-hour one-day/week) in-house trainings at ICAR HQs was initiated without any financial liability. About 340 administrative staff of ICAR HQs have participated in such training sessions.

### 7.3.26 Training for Retiring Employees for Better, Peaceful and Healthy Post-retirement Life

ICAR is not only arranging training programmes for the serving employees of all categories but also provides opportunity to those employees who are going to retire shortly to acquaint them with the benefits admissible on their retirement; various investment plans where they can park their funds; income tax clauses concerning investment and how to live healthy and happy retired life, etc. Four employees (01 Scientist, 01 Technical and 02 Administrative staff) have



been nominated, who are going to superannuate shortly, for two days Orientation Training Programme for Retiring Govt. Officials in the Institute of Secretariat Training and Management (ISTM), New Delhi. The major objective of such Training Programme is to train the retiring Govt. officials to live better, peaceful and healthy post-retirement life. This shows the sensitivity and concern of ICAR towards its employees.

### 7.3.27 First-time Training of Employees after Joining ICAR Service

After creation of HRM Unit and appointment of Assistant Director General (HRM) as Training Manager at ICAR HQs, it was felt necessary to adopt systematic approach of training to enhance capacity building of all four categories of employees as per National Training Policy - 2012, GoI. Consequently, identified 253 training needs of all categories of employees (128, 55, 39 and 31 training areas for Scientific, Technical, Administrative staff including finance, and Skilled Support Staff, respectively) during 2015-16 and 2016-17 for the first time in ICAR to design, develop and organize specialized training programmes. Suitable training modules were designed and developed to address the training needs of the employees to impart necessary knowledge, skills and behaviours to the trainees, particularly those employee who did not get any chance after joining ICAR service. Therefore, suitable specialised training programmes for Technical Staff, Stenographer Grades, Regular Drivers, Farm Manager, Guest Incharges/Care takers, Administrative/Technical staff dealing with Court cases, Security, repair and maintenance, Master Trainers, SSS, etc. lacking in the ICAR system were designed, developed and organized. The notion to focus on the training of the Scientific staff only was discontinued and the notion to train all categories of employees for developing desired competency was promoted after creation of HRM Unit at ICAR HQs as growth and performance of an Organization depends on competency and dedication of all category of employees. Based on the identified training needs, leading ICAR-Institutes designed, developed and organized specialised training programmes (Table 10). It is evident from Table 10 that a great proportion of employees of different categories had first time opportunity to participate in a particular type of training or any kind of training after joining the ICAR service with the creation of HRM Unit at ICAR HQs. This clearly indicates that ICAR has been effectively able to address the training deficiency of different categories of employees prevailing in the system for decades.

So far, competent ICAR-Institutes/HQs have organized 04 EDPs with International exposure visits for Senior Officers; 12 programmes for Scientific staff; 02 training programmes each for Vigilance Officers, ITMU/ZTMU Incharges, PME Cell Incharges and Guest House Incharges/Caretakers; 08 programmes for HRD Nodal Officers; 77 programmes for Technical staff; 01 programme each for Administrative including Finance staff for Developing Master Trainers, CJSC members, Administrative/technical staff dealing with court cases, security, repair and maintenance; 17 programmes for Administrative staff including Finance; 11 programmes each for Regular Drivers in Technical grades and Stenographers grades; 06 programmes for Farm Managers/Technical staff dealing with farm; 03 programmes for Librarian/Technical staff dealing with library and; 311 programmes for SSS during 2014-20. A total of 473 new specialized

programmes were organized, in which 6433 employees of various categories participated, out of which 4883 (75.9%) participants either availed the first-time opportunity to attend any training programme after joining ICAR service or attended a particular type of programme first-time after getting the specific role/charge.

**Table 10.** First-time opportunity to employees to attend new specialized training programmes after joining ICAR service (2014-20)

S. No.	Training Programme	Organizing Institute	Category of Staff	Year	No. of Prog.	Participants (No.)	Attended First Time after Joining ICAR service
1.	Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR with International Exposure visit	ASCI with NAARM, Hyderabad and HRM Unit, ICAR	Senior Officers of ICAR	2017-20	04	65	65* (100)
2.	Competency Development/ Enhancement Programme on Effective Implementation of Training Functions by HRD Nodal Officers of ICAR	NAARM, Hyderabad	HRD Nodal Officers	2015-19	08	110	110* (100)
3.	Training Workshop for Vigilance Officers of ICAR	NAARM, Hyderabad	Vigilance Officers	2018-20	02	67	67* (100)
4.	IP Valuation and Technology Management	NAARM, Hyderabad	ITMU/ ZTMU Incharges	2018-20	02	44	44* (100)
5.	MDP on Priority Setting, Monitoring and Evaluation (PME) of Agricultural Research Projects	NAARM, Hyderabad	PME Cell Incharges	2018-20	02	64	62* (97)



S. No.	Training Programme	Organizing Institute	Category of Staff	Year	No. of Prog.	Participants (No.)	Attended First Time after Joining ICAR service
6.	Specific trainings based on training need assessment (TNA)	Leading 04 ICAR-Institutes	Scientific staff	2017-20	12	204	64** (31) Other than FOCARS
7.	Automobile Maintenance, Road Safety and Behavioural Skills	CIAE, Bhopal	Regular Drivers in Technical grade	2016-20	11	310	279** (90)
8.	Hospitality Management	NAARM, Hyderabad in collaboration with IHMCT&AN, Hyderabad	Guest House Incharges/ Caretakers	2018-20	02	50	47 (94**/ 100*)
9.	Enhancing Efficiency and Behavioural Skills	NAARM, Hyderabad	Stenographers grades	2016-20	11	333	271** (82)
10	Capacity Building Programme Towards a Secure & Resilient Workplace	CPRI, Shimla in coordination with HRM Unit, ICAR HQs	Administrative/ Technical staff dealing with Security	2019-20	01	31	31* (100)
11.	Improving Skills of Administrative Staff of ICAR dealing with Court Cases	CAZRI, Jodhpur in coordination with Legal Cell and HRM Unit, ICAR HQs	Administrative staff dealing with Court Cases	2019-20	01	18	18* (100)
12.	Farm Management	IIFSR, Modipuram	Farm Manager/ Tech staff associated with Farm	2016-20	06	145	34** (24)
13.	KOHA	NAARM, Hyderabad	Library Staff	2017-20	03	92	80** (87)
14.	Trainers Development Programme for Developing Masters' Trainers in ICAR	NAARM, Hyderabad in coordination with Administration Section & HRM Unit, ICAR HQs	Administrative & Finance Staff	2019-20	1	22	22* (100)



S. No.	Training Programme	Organizing Institute	Category of Staff	Year	No. of Prog.	Participants (No.)	Attended First Time after Joining ICAR service
15.	Repair and Maintenance of Office, Residential Building including Guest Houses	CIAE, Bhopal in coordination with Works Cell and HRM Unit, ICAR HQs	Administrative /Technical Staff associated with Works/ Estate/Building Maintenance	2019-20	01	29	09 (31**/ 100*)
16.	Capacity Building Programme for CJSC Members	NAARM, Hyderabad	CJSC Members	2019-20	01	89	89* (100)
17.	Specific trainings based on TNA	Leading 17 ICAR-Institutes	Technical staff	2016-20	77	1462	568** (39)
18.	Specific trainings based on TNA	Leading 04 ICAR-Institutes	Administrative staff	2017-20	17	446	313** (70)
19.	Specific trainings based on TNA	Almost all Institutes/HQs	SSS	2014-20	311	2852	2710** (95)
	Total				473	6433	4883*** (75.9)

\*Such type of Programme; \*\* Any type of Programme and \*\*\* Such or Any type of Programme

Figures in parenthesis represent per cent staff attended training first time after joining ICAR service or such type of training programme

## 7.4 Monitoring of ATP Implementation

Monitoring of ATP implementation by ICAR-Institutes is important to know effective implementation of ATP submitted in the beginning of the financial year by each Institute. The monitoring was done for all the ICAR-Institutes based on ATP submitted for 2016-17, 2017-18 and 2018-19, and Annual Physical and Financial Targets and Achievement Report 2016-17, 2017-18 and 2018-19. Accordingly, the Institutes were rated based on the criteria shown below in Table.

Rating (% ATP Implemented)	Grading
<20	Extremely poor
20-39	Very Poor
40-49	Poor
50-59	Satisfactory
60-69	Good
70-79	Very Good
80 and above	Excellent





Suitable feedbacks were also given to each Institute based on the monitoring. Consequent on receiving the feedback, all the Institutes have taken care during 2017-18 and 2018-19 in effective implementation of the ATP. Normally, they are deputing only those employees whose names are included in the ATP as well as are very cautious in deputing the employee(s) more than once during the calendar year. This is resulting in better training opportunities for all with assurance that the employees will attend the relevant trainings based on their identified training needs. This has also improved the capacity utilization of trainings organized.

## 7. 5 Evaluation of Training Programmes

In Systematic Approach to Training, every training organized should be evaluated against its objectives for its usefulness to the Organization. This enables the Organization to take corrective actions and course corrections in their training management systems. Evaluation is an attempt to obtain information on the effects of training programme and to assess the value of training in the light of that information for improving further training. Evaluation of training is vital in the training process for the following reasons:

- To determine the extent and degree of a training programme fulfilling its set objectives.
- To verify the suitability and feasibility of the objectives set for the training programme.
- To provide feedback on the performance of the trainees, trainers, the quality of training and other facilities provided.
- To identify and analyze whether the training content and training methods are in line with the objectives intended to be achieved.
- To enable improvements in the assessment of training needs.
- To aid the learning process of the trainees by providing the knowledge of results.
- To highlight the impact of training on the behaviour and performance of individuals.

In general, the training programmes are being evaluated by all the Organizing Institutes and taking the feedback of the trainees on various aspects of training for further improvement. Such evaluation of trainees and trainers are also sent to HRM Unit, ICAR HQs which is analyzed and assessed to redefine the programmes, its objectives, methodology, training content, suitable type of trainees, logistics and facilities to organize the programme successfully in meaningful manner. The third party evaluation would be done in future for better assessment of training programmes.

## 7.6 Impact Assessment of Training Programmes

The main objective of the assessment of training programmes is to find out whether the given training creating any impact on the job behaviour or performance of the trainees. This involves collecting feedback from the trainee himself/herself and his/her immediate Reporting Officer so as to know whether there has been any perceptible improvement in his/her job behaviour and performance.

For the first time, Impact Assessment of training programmes attended during 2016-17 by various categories of employees was done and thereafter, continued for the training programmes attended during 2017-18 also. A total of 106 ICAR-Institutes submitted Impact Assessment Report for 4402 trainees (2211 during 2016-17 and 2191 during 2017-18) who had attended any training programme during 2016-18 with an average age of 43.7 years and average experience of 16.9 years. Out of 4402 participants, 952 were the female participants. The proforma developed by DoPT for this purpose was used (DoPT, 2016) and now using updated Impact Assessment Program modified by domain specific experts (Annexure XIII).

Based on the feedback of Trainees received from different ICAR-Institutes, the overall Impact of training was Considerable-Great Extent with average rating of 3.74/5.00 (Table 11). Similarly, based on the feedback of Reporting Officers of the Trainees received from different ICAR-Institutes, the overall impact of trainings on Trainees was also Considerable-Great Extent with average rating of 3.61/5.00 (Table 12).

**Table 11. Feedback by the TRAINEES on the impact of training on their job**

Parameter	Rating out of 5.00	
	2016-17	2017-18
To what extent did the said training address your training needs?	3.83	3.82
To what extent can you relate the learning of the training to your job?	3.83	3.77
To what extent are you able to apply the learning of the said training in your job?	3.72	3.70
To what extent did the training help you to improve your job performance?	3.69	3.68
To what extent has been the improvement in your job performance, when you compare the pre-training scenario and the post- training scenario?	3.67	3.66
Average rating	3.75	3.72

**Table 12. Feedback by the TRAINEES' SUPERVISORS (REPORTING OFFICERS) on the impact of Training on their job**

Parameter	Rating out of 5.00	
	2016-17	2017-18
To what extent did the said training address the trainee's training needs?	3.66	3.79
To what extent the trainee able to relate the learning of the training to the job?	3.60	3.73
To what extent the trainee able to apply the learning of the said training in the job?	3.51	3.58
To what extent did the training help the trainee to improve his/her job performance?	3.51	3.65
To what extent has been the improvement in the trainee's job performance, when you compare the pre-training and the post- training scenarios?	3.46	3.54
Average rating	3.55	3.66

The effectiveness of trainings conducted/attended during 2017-18 in ICAR was studied and statistically analysed. About 2239 staff belonging to all four categories attended the training



from 106 ICAR-Institutes across 26 states/UTs but 1782 employees responded appropriately. On an average, about 31% were female employees. It was revealed that pooled perceived training effectiveness index (PTEI) was 3.86, referring medium effectiveness of trainings. The mean PTEI score was the highest for SSS (3.94) followed by Administrative staff (3.90). Overall, most of the participants (58.83%) reported medium degree of effectiveness of the training programmes. Significant behavioral changes and changes in practices as a consequence of exposure to the trainings were observed. The study also revealed that the perceived training effectiveness was significantly associated with age, gender, experience of the trainees and duration of training programmes (Vyas *et al.*, 2020; Annexure XIV). The PTEI was positively and significantly associated with age and gender while negatively and significantly associated with experience of trainee. Some observed constraints of the trainees were inadequate infrastructure at the Institute, particularly with regard to lodging and boarding; lack of practical exposure; and sometimes lesser relevance of few topics, etc. The major suggestions were inclusion of more practical sessions; follow up programmes for trainer-trainee meet, and increasing the duration of trainings in few cases.

The PTEI was strongly associated with Subject Matter Divisions (SMDs) and category of employees. Scientists of Ag. Engineering Division had highest PTEI score (3.98) followed by Animal Science (3.87). In case of other than Scientist category (Technical, Administrative and Skilled Support Staff), the highest PTEI score was achieved by Fisheries Science Division (4.16) followed by Crop Science Division (4.04). It was concluded that the trainings organized by ICAR should continue for all staff to bring about desirable changes in competencies. About 65.3% participants from Ag. Engineering Division attached medium level of effectiveness of training programmes followed by Crop Science Division (54.1%). About 42.9% participants from Horticulture Science Division attached high level of effectiveness of training programmes closely followed by Ag. Education Division (42.1%).

Thus, the Systematic Approach to Training is effectively followed in ICAR for all categories of employees right from TNI, Design and Development of training programme, their Implementation, Evaluation and Impact Assessment.

## 8. HRD Budget Allocation and Utilization

During 2013-14, a sum of Rs 623 lakh was allotted to different ICAR-Institutes/HQs for performing the HRD activities judiciously for the all categories of the employees (Fig. 3). Out of this, a sum of Rs 578 lakh was utilized and the effective utilization per cent was 92.8. During 2014-17 (average of 3 years), more or less same budget was allocated and utilized whereas during 2017-20 (average of 3 years), a slightly higher budget i.e. about Rs. 836 lakh was allocated while the utilization was Rs 672 lakh. Though the budget enhancement during 2017-20 was 34.2 per cent over 2013-14 but there was drastic increase in the number of employees trained particularly in case of Technical, Administrative and Skilled Support Staff by utilization of the HRD budget most judiciously and economically as evident from Fig. 4-6.

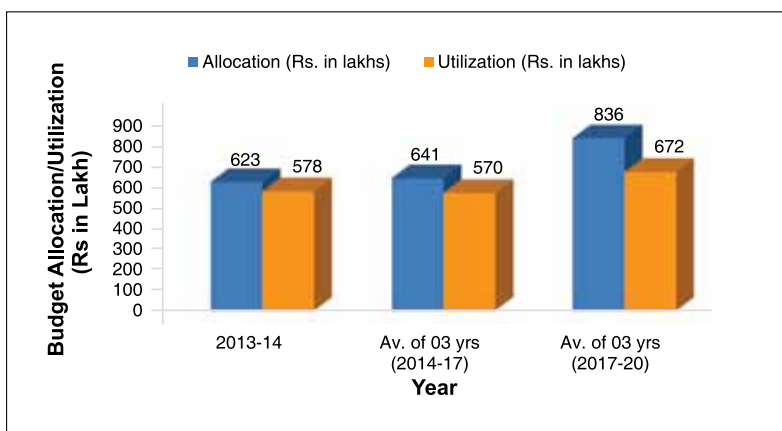


Fig.3: HRD Fund Allocation and Utilization since 2013-14

## 9. Major Outcomes of the HRM Initiatives

### 9.1 Manpower Trained (In Terms of Number)

It is apparent from the average data of 3 years that during the initial phase of establishment of HRM Unit and Policy implementation during 2014-17, a total of 3204 employees were trained in various training and capacity building programmes, out of which Scientist, Technical, Administrative including Finance, and Skilled Support Staff (SSS) were 1332, 767, 625 and 480, respectively. During 2017-20, the number of trained personnel increased in Technical and Administrative staff categories due to effective implementation of the Policy (Fig. 4). A total of 3352 employees were trained, out of which Scientist, Technical, Administrative including

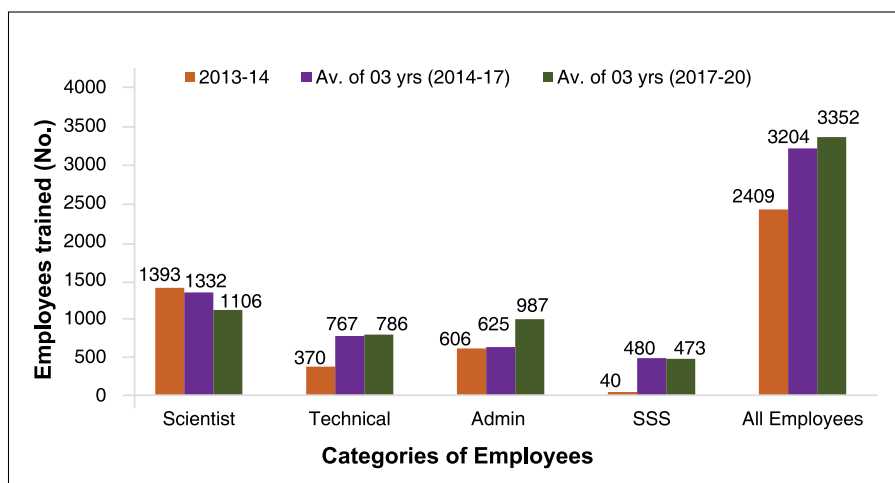


Fig.4: Improvement in Capacity Building of ICAR Employees since creation of HRM Unit



Finance, and Skilled Support Staff (SSS) were 1106, 786, 987 and 473, respectively on the basis of average data of last 3 years i.e. 2017-20. Compared to 2013-14, there was considerable improvement in average number of employees undergone trainings particularly in case of Administrative, Technical and Skilled Support Staff, where per cent improvement was 62.9, 112.4 and 1082.5, respectively along with overall improvement of 39.1 per cent in all the categories of employees on the basis of mean data of 3 years (2017-20).

Based on 3 years' mean data (2014-17), Crop Science Division deputed highest number of Scientist (326), Technical (223) and Skilled Support Staff (123) while highest number of Administrative staff was deputed by NRM Division (94) for various capacity building programmes (Table 13). Apart from SMDs, ICAR HQs deputed maximum number of Administrative staff (142). During the effective implementation phase (2017-20), Crop Science Division deputed the highest number of all categories of staff i.e. Scientist (302), Technical (257), Administrative (254) and Skilled Support Staff (117). Overall, maximum average number of employees were trained in Crop Science Division (930) followed by Horticulture Science Division (583), out of 3,352 employees trained/year in the ICAR system during 2017-20.

**Table 13. SMD-wise number of employees of various categories undergone training**

SMDs/ HQs	2013-14					Av. of 3 years (2014-17)					Av. of 3 years (2017-20)				
	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total
Crop Sci.	368	62	78	12	520	326	223	93	123	765	302	257	254	117	930
Hort Sci.	227	94	62	13	396	205	124	80	82	491	177	140	159	107	583
NRM	198	77	96	4	375	201	148	94	65	508	151	130	118	46	445
Ag. Edu.	31	12	28	0	71	40	30	33	20	123	26	20	34	27	107
Ag. Engg.	103	24	78	8	213	77	46	25	36	184	43	41	48	20	152
Animal Sci.	288	24	28	3	343	236	83	86	54	459	200	95	125	80	500
Fisheries Sci.	148	70	50	0	268	196	86	56	99	437	179	92	134	55	460
Ag. Ext.	12	0	1	0	13	24	6	16	1	47	10	6	24	1	41
ICAR HQs	18	7	185	0	210	27	21	142	0	190	18	5	91	20	134
Total	1393	370	606	40	2409	1332	767	625	480	3204	1106	786	987	473	3352

S: Scientist; T: Technical; Admin: Administrative; SSS: Skilled Support Staff

## 9.2 Per Cent Manpower Trained

In terms of per cent employees trained under each category, Scientist (22.5%), Technical (16.5%), Administrative including Finance (30.6%) and Skilled Support Staff (10.7%) were trained in various aspects as per their training needs during 2017-20 (on average basis) with overall 19.3 per cent employees across the categories got opportunity for capacity building. The per cent employees trained during effective phase of Policy implementation (2017-20) was higher in Technical, Administrative including Finance, Skilled Support Staff and all employees than initial phase (2014-17). Though, there was significant increase in per cent Technical, Administrative and Skilled Support Staff trained during 2014-17 compared to 2013-14. As compared to

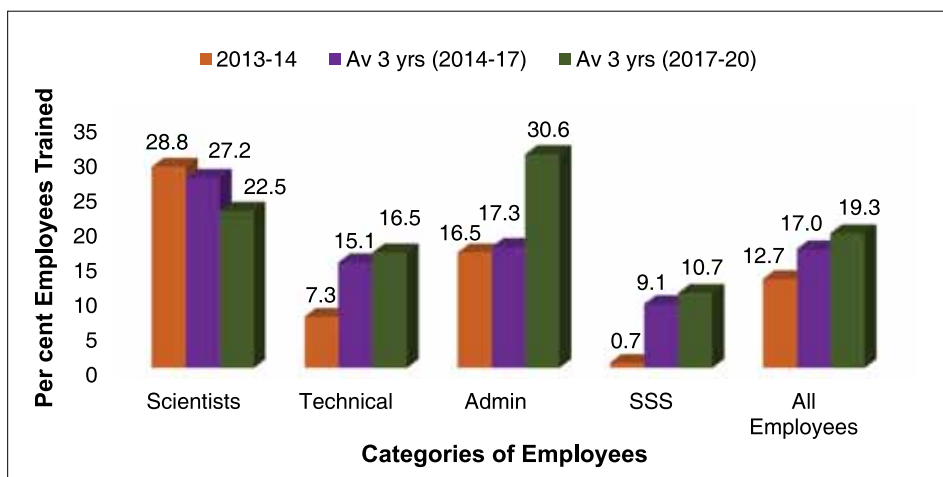


Fig.5: Per Cent Employees Trained since creation of HRM Unit

2013-14, 9.2, 14.1, 10.0 and 6.6 per cent more Technical, Administrative including Finance, Skilled Support Staff and all employees, respectively got training opportunities during 2017-20 (on average basis) (Fig. 5).

Among the larger Divisions of ICAR (based on number of Institutes), maximum percentage of employees undergone training and capacity building programmes in Horticultural Science (24.1) followed by Animal Science Division (20.4) on the basis of average of 03 years i.e. 2017-20 (Table 14). Among the smaller Divisions, Fisheries Science Division deputed the highest number of Scientist, Technical and Administrative staff with an overall average of 33.0 per cent while maximum number of Skilled Support Staff were trained at ICAR HQs (32.3%). During 2014-17, maximum per cent of employees were deputed by Horticultural Science Division (19.2%)

Table 14. SMD-wise per cent employees of various categories undergone training

SMDs/ HQs	2013-14					Av. of 3 years (2014-17)					Av. of 3 years (2017-20)				
	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total
Crop Sci.	23.2	4.2	9.0	0.8	9.6	20.6	15.4	10.9	8.5	14.3	18.1	18.5	28.1	8.8	17.6
Hort Sci.	31.4	12.3	14.4	1.9	15.3	27.8	16.4	18.3	13.0	19.2	24.5	19.9	39.7	17.9	24.1
NRM	25.5	9.2	19.1	0.5	12.9	25.4	15.3	19.4	8.5	16.9	19.1	13.3	26.6	7.4	15.7
Ag. Edu.	53.4	21.8	50.9	0.0	34.3	41.2	36.1	38.8	36.0	38.4	7.4	6.3	13.5	5.1	7.4
Ag. Engg.	41.5	6.3	35.5	3.5	19.7	35.2	13.6	13.8	17.8	19.5	21.7	14.9	33.6	14.2	20.1
Animal Sci.	37.1	2.8	4.5	0.2	8.9	30.3	10.6	14.2	3.4	12.2	31.6	15.4	32.3	9.8	20.4
Fisheries Sci.	27.8	12.2	14.5	0.0	13.7	34.4	15.0	16.7	19.9	22.1	39.7	24.0	55.2	17.3	33.0
Ag. Ext.	26.7	0.0	1.2	0.0	7.3	54.4	15.4	18.9	9.5	26.5	28.6	20.9	41.1	11.5	31.4
ICAR HQs	22.2	7.9	34.0	0.0	26.6	33.3	23.6	26.1	0.0	24.1	25.1	6.7	23.2	32.3	22.3
Total	28.8	7.3	16.5	0.7	12.7	27.2	15.1	17.3	9.1	17.0	22.5	16.5	30.6	10.7	19.3

S: Scientist; T: Technical; Admin: Administrative; SSS: Skilled Support Staff





among the larger Divisions whereas among the smaller Divisions, Agricultural Education Division deputed highest number of employees (38.4%) across the various categories. With the creation of HRM Unit at ICAR HQs, about 19.3% employees are getting training opportunity during 2017-20 on an average per year as compared to 12.7% in 2013-14.

### 9.3 Trainings Organized

Based on 3 years' mean data (2017-20), the average number of training programmes organized for Scientist, Technical including Drivers, Administrative including Finance and Stenographers, and Skilled Support Staff were 257, 100, 42 and 40, respectively with overall 439 trainings for all categories of employees (Fig. 6) which is slightly less compared to 2014-17 in all the categories except Technical staff. Compared to 2013-14, ICAR-Institutes/HQs. organized 49.3 and 700.0 per cent more average number of training programmes for Technical and Skilled Support Staff, respectively during 2017-20 (Fig 6). There was more focus to provide training opportunities outside ICAR in other competent and relevant Institutes during 2017-20.

Among the larger Divisions of ICAR (based on number of Institutes), Crop Science Division organized maximum number of trainings for Scientist (55), Technical (37), Administrative (9) and Skilled Support Staff (12) with overall maximum number of trainings (113) followed by

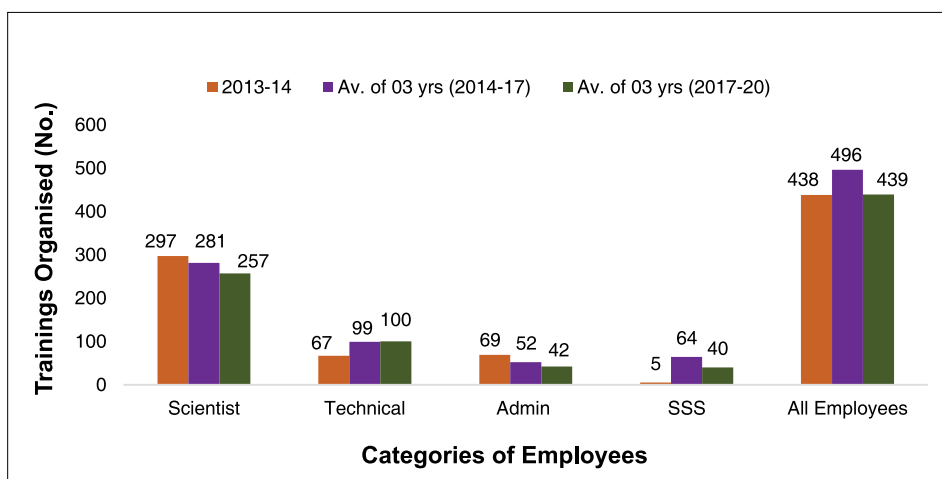


Fig.6: Trainings organized by various ICAR-Institutes/HQs

Animal Science Science Division (54) based on 3 years' mean data (2017-20) (Table 15). Among the smaller Divisions, Ag. Education Division organized maximum number of trainings (76) for all categories of employees during 2017-20.


**Table 15. SMD-wise number of trainings organized for various categories of employees**

SMDs/HQs	2013-14					Av. of 3 years (2014-17)					Av. of 3 years (2017-20)				
	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total	S	T	Admin	SSS	Total
Crop Sci.	57	10	13	1	81	65	38	16	39	158	55	37	9	12	113
Hort Sci.	15	4	3	1	23	28	11	4	10	53	17	15	4	11	47
NRM	34	11	7	2	54	36	9	4	2	51	35	9	2	1	47
Ag. Edu.	51	8	13	0	72	45	9	6	2	62	56	9	10	1	76
Ag. Engg.	28	8	6	0	42	30	11	7	1	49	24	9	1	1	35
Animal Sci.	65	6	5	0	76	50	10	4	5	69	35	9	4	6	54
Fisheries Sci.	39	15	10	1	65	19	6	3	5	33	17	8	6	6	37
Ag. Ext.	8	1	0	0	9	7	3	0	0	10	17	4	3	1	25
ICAR HQs	0	4	12	0	16	1	2	8	0	11	1	0	3	1	5
Total	297	67	69	5	438	281	99	52	64	496	257	100	42	40	439

S: Scientist; T: Technical; Admin: Administrative; SSS: Skilled Support Staff

## 10. Training Management Information System (TMIS)

Training Management Information System is the activity of recording and maintenance of the crucial data related to the training activities that are carried out in each ICAR-Institutes/HQs. As the saying goes, “What is not recorded cannot be measured and what is not measured cannot be improved”. Therefore, it is required that the various data items pertaining to the training management should be captured and recorded so that the various efficiency/effectiveness factors can be measured. Similarly, if the efficiency and effectiveness factors are measured, then they can be analysed and required improvement measures can be arrived at. Basically, it will ease out the training management process. Training Management Information System helps tracking of different aspects of training. Following are the components of TMIS:

- Training Application Process (Application)
- Training Feedback Process (Feedback)
- Training Evaluation Process (Performance Indicators)
- Training Needs/Gap Assessment (TNA)

For the first time in ICAR, the responsibility of developing, testing, implementing and executing the TMIS was assigned to ICAR-IASRI, New Delhi with overall supervision of HRM Unit, ICAR HQs. The basic framework of TMIS was developed by ICAR-NAARM, Hyderabad in consultation with HRM Unit, ICAR HQs. It has been launched on 31<sup>st</sup> January, 2019 in the Directors’ Conference held at NASC Complex, New Delhi and made mandatory for all ICAR-Institutes/Headquarters/PC Units with ICAR employees to submit the Annual Training Plan (ATP) and applications for attending Training Programme in ICAR/Non-ICAR Institutes w.e.f. 1<sup>st</sup> April, 2019 and most of the Institutes including HQs submitted ATP for 2019-20 online through TMIS. One day online Workshop was organized by HRM Unit, ICAR in collaboration



with ICAR-IASRI, New Delhi on TMIS for HRD Nodal Officers of ICAR on 8<sup>th</sup> May, 2020 for HRD Nodal/Co-Nodal Officers of Institutes. Participants from all ICAR-Institutes were acquainted about proper functioning of TMIS and its implementation. This has attained greater relevance during the COVID-19 pandemic period. It is likely that soon the training management of employees would become completely paperless.

### 11. Maintaining Database of Trained Manpower

Developing complete and comprehensive database of training details of all categories of employees provide a logical backup for assessing the training needs/gaps and help in planning present and future training programmes. Such a database also helps in effective manpower planning and their effective deployment in the organization. Keeping in view of the crucial importance of this activity, all the Directors of ICAR Institutes were requested for entering information on training of all the categories of employees of the Institutes as well as Regional Stations. The training details of about 10,000 employees of various categories (scientist, technical, administrative and SSS) have been updated in the ERP system of ICAR with the help of ICAR-IASRI, New Delhi.

### 12. Resource Generation

As per the “*ICAR HRM Policy: Training and Capacity Building*”, ICAR being the apex body of the National Agricultural Research and Education System (NARES) of the country has to play an important role in supporting the development of training capacity in the SAUs, Central Agricultural Universities (CAUs) and ICAR funded KVKs. Since SAUs, CAUs and ICAR funded KVKs are the integral part of NARES, therefore, they may be given opportunity to avail the expertise available with the ICAR system. The NARES including ICAR is committed to solve the existing problems of Indian agriculture and enhancing agricultural production and productivity in the country through science-led and technology-driven farming systems approach. Therefore, it was felt appropriate to extend the training facility of ICAR to the employees of SAUs, CAUs and ICAR funded KVKs in various training programmes for enhancing their competency by charging a nominal fee without putting additional burden on the HRD fund of ICAR. By this way, approx. a sum of Rs 318.00 lakh was generated through participation of employees particularly from SAUs, CAUs, Central/State Govt. and ICAR funded KVKs during 2017-20.

### 13. New Chapter on “Training and Capacity Building” in Annual Report

As per the National Training Policy-2012 of Government of India, it is mandatory for each Ministries/Departments to include a chapter on “*Training and Capacity Building*” in their Annual Report. Keeping this in view, ICAR has also included a chapter on “*Training and Capacity Building*” in the Annual Reports of DARE/ICAR as well as most of the ICAR-Institutes since 2016. This highlights the Training and Capacity Building initiatives and the importance attached with this activity by the Organization/Institution.



## 14. Paperless Communication with Zero Expenditure

A paperless office (or paper-free office) is a work environment in which the use of paper is eliminated or greatly reduced. This is done by converting documents and other papers into digital form, a process known as digitization. It is claimed that “going paperless” can save money, boost productivity, save space, make documentation and information sharing easier, keep personal information more secure, and help the environment. Further, in order to contribute in the Hon’ble Prime Minister’s vision of Digital India campaign, the importance of paperless communication by HRM Unit of ICAR with all ICAR-Institutes/HQs was realised after the creation of HRM Unit for effective and fast means of communication which is most economical and environment friendly. The HRM Unit has almost achieved 100% paperless communication with all 114 ICAR-Institutes/HQs and other non-ICAR Institutes since 2016.

## 15. New Approach to Connect HRD Nodal Officers

WhatsApp Messenger is a cross-platform instant messaging application that allows phone and smartphone users to exchange text, image, video and audio messages for free. Therefore, for effective transfer/exchange of ideas and information related to HRD activities among HRD Nodal Officers of ICAR-Institutes/HQs, a WhatsApp group named as ‘HRD Nodal Officers-ICAR’ has been created and operationalized since 2016 and it remains live for 24 x 7. This is very effective to flash any important information related to HRD in brief and also shares motivational quotes and videos across all the ICAR-Institutes located in different parts of the country.

## 16. Epilogue

In last six years (2014-20), ICAR organized training and capacity building programmes from grassroot level Staff (i.e. Skilled Support Staff and Drivers) to the Senior Officers of ICAR with international component, and effectively implemented the Systematic Approach to Training. There was very considerable improvement in manpower trained with the effective implementation of Policy during 2016-20. Impact Assessment of training programmes attended during 2016-17 and 2017-18 by various categories of employees revealed that the overall Impact of training was Considerable - Great Extent as per DoPT parameters. The effectiveness of trainings conducted/attended during 2017-18 in ICAR by about 1782 staff belonging to all four categories revealed that pooled perceived training effectiveness index (PTEI) was 3.86, referring medium effectiveness of trainings. The mean PTEI score was the highest for SSS (3.94) followed by Administrative staff (3.90). Significant behavioural changes and changes in practices as a consequence of exposure to the trainings were observed in the study. It was concluded that the trainings organized by ICAR should continue for all staff to bring about desirable changes in competencies.



The HRD funds were utilized very economically and judiciously for the competency enhancement of all categories of employees as per TNI. The Training Management Information System (TMIS) in ICAR has been developed and implemented to address the need of the employees to achieve the organizational Vision and Mandate effectively. This would certainly help in achieving paperless training management of about 17,100 employees.

Secretary, DARE & DG, ICAR shared the HRM initiatives taken in ICAR in the Conference of Heads of Administrative Training Institutes (ATIs) and Central Training Institutes (CTIs) organized by DoPT, GoI on 4 December, 2017 at CSOI, New Delhi. The initiatives and accomplishments were highly acknowledged and recognized. Consequently, a decision was taken in the Conference that “*Training Programmes for the categories who are never exposed to training (Class IV/Drivers etc.) should be developed and implemented to develop Knowledge, Skills and Attitude*”. Different Central Govt. Ministries/Departments have started implementation of the decision taken based on ICAR experience.

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68	IINRG, Ranchi	Dr (Ms) Mahtab Z. Siddiqui Principal Scientist (Organic Chemistry) Phone (O): 0651-2261156; Fax:0651-2260202 Mob.: 9934937070	mzs_2009@rediffmail.com
69	NIRJAFT, Kolkata	Dr Samir Baran Roy, Principal Scientist Phone (O): 033 2471 2115/16/17 Fax: 033 2471 2583; Mob.:9433156187	drsbroy@msn.com



S. No.	Institute/HQs	Details of HRD Nodal Officers	Email Id
<b>AGRICULTURAL EDUCATION</b>			
70	CIWA, Bhubaneswar	Dr J Charles Jeeva, Principal Scientist (Ag Extn) Phone (O): 0674-2387220; Fax: 0674-2387242 Mob: 8093789731	jcjeeva@gmail.com
71	NAARM, Hyderabad	Dr R V S Rao, Principal Scientist Phone (O) 040-24581305; Fax: 040-24015912 Mob.:9441822224	rvs@naarm.org.in rvsenator@gmail.com
72	IASRI, New Delhi	Dr (Ms) Seema Jaggi, Principal Scientist and Head Phone (O): 011-25857284; Fax: 011-25841564 Mob.:9873169418	seema.jaggi@icar.gov.in
73	NIAP, New Delhi	Dr Subhash Chand, Principal Scientist Phone (O):011-25847628; Fax: 011-25842684 Mob.:7503203364	s.chand@icar.gov.in
<b>ANIMAL SCIENCES</b>			
74	CARI, Izatnagar	Dr Pramod K Tyagi, Principal Scientist Mob.: 9359123666	Pramod.Tyagi@icar.gov.in; pramodtyagicari@rediffmail.com;
75	CIRB, Hisar	Dr (Ms) Hema Tripathi, Principal Scientist Transfer of Technology & Entrepreneurship Unit Phone (O): 01662-281606 Fax: 01662-275004; Mob.: 9410499821	hematripathi1@gmail.com
76	CIRC, Meerut	Dr Pramod Singh, Principal Scientist Phone (O)-0121-02645598, 2656021 Extn. 253 Fax: 0121-2657134; Mob.: 9862103678	praamodsingh@gmail.com
77	CIRG, Mathura	Dr M K Singh, Principal Scientist Phone (O): 0565-2763380 Fax: 0565-2763246 Mob.:96754710963, 9412826683	manojnaip@gmail.com
78	CSWRI, Avikanagar	Dr S K Sankhyan, Principal Scientist Phone (O): 01437-220281 Fax:01437-220163; Mob.:9414311437	surendra.sankhyan@icar.gov.in; hrd.cswri@icar.gov.in; hrdcswri@gmail.com
79	DPR, Hyderabad	Dr B L N Reddy, Principal Scientist Phone (O):040-24015651 Extn.104 Fax:040-24017002; Mob.:9866706916	blnreddydpr@gmail.com
80	IVRI, Izatnagar	Dr A K Pandey, Principal Scientist Mob: 9416295734	ashwni.pandey@gmail.com hrdcellivri@gmail.com
81	NBAGR, Karnal	Dr Raja K N, Sr Scientist Mob: 9416087785	drknraja@yahoo.co.in
82	NDRI, Karnal	Dr (Ms) Anjali Aggarwal, Principal Scientist Phone (O): 0184-2259090 Fax:0184-2250042; Mob.:9416951819	anjaliaggarwal23aa@gmail.com
83	NIANP, Bengaluru	Dr S Anandan, Principal Scientist Phone (O):080-25711304 Extn 303 Fax:080-25711420; Mob.:9482226331	anandsrp@yahoo.co.in



S. No.	Institute/HQs	Details of HRD Nodal Officers	Email Id
84	NIHSAD, Bhopal	Dr Ashwin Ashok Raut, Principal Scientist Phone (O): 755-2750647 Extn.398 Fax: 755-2758842; Mob.:9039015873	ashwin.nihsad@gmail.com;
85	NIVEDI, Bengaluru	Dr Rajeswari Shome, Principal Scientist Phone (O): 080-23093132 Fax 080-23093222 Mob.: 9480520541	rajeswarishome@gmail.com;
86	NRCE, Hisar	Dr Sanjay Kumar, Principal Scientist Phone (O): 01662-276151 Extn. 203 Fax: 01662-276217; (M)- 9416481076	hrd.nrce@gmail.com
87	NRCC, Bikaner	Dr. Rakesh Ranjan, Principal Scientist Phone (O): 0151-2230183 Fax: 0151-2970153 Mob.: 9462470522	Rakesh.Ranjan@icar.gov.in
88	NRCM, Hyderabad	Sh. Laxman Chatlod, Scientist Mob.: 9474833488	chatlodlaxman@rediffmail.com;laxman.ramalu@icar.gov.in
89	NRCM, Jharnapani	Dr. Sapunii Stephen Hanah, Scientist Mob.: 8132903220	stephenhanah@gmail.com; Sapunii.Hanah@icar.gov.in
90	NRCP, Guwahati	Dr Keshab Barman, Principal Scientist Phone (O): 0361-2847195 ;Fax: 0361-2847195 Mob.: 9435304536	barman74@gmail.com
91	NRCY, Dirang	Dr Vijay Paul, Principal Scientist Mob.: 8414990193; 9402474192	Vijay.Paul@icar.gov.in
92	DFMD, Mukteshwar	Dr Rajeev Ranjan, Scientist Phone (O): 05942-286004 Fax: 05942-286307 Mob.:9690576277	drrajraj@gmail.com
<b>FISHERIES SCIENCE</b>			
93	CIFRI, Barrackpore	Dr S K Nag, Principal Scientist Phone (O): 033-25921190 Fax: 033-2592 0388; Mob.: 8902648620	subirknag@yahoo.com
94	CIBA, Chennai	Dr M. Makesh, Principal Scientist Mob: 9444946675	mmakesh@ciba.res.in
95	CIFE, Mumbai	Dr S N Ojha, Principal Scientist and Head Mob.:9869637930	snojha@cife.edu.in; Shekhar.Ojha@icar.gov.in;
96	CIFT, Cochin	Dr K K Asha, Principal Scientist Mob: 9496428634	pshinaj@gmail.com
97	CIFA, Bhubaneswar	Dr K N Mohanta, Principal Scientist Phone (O): 0674-2465446; Fax: 0674-2465407 Mob.: 8895211657	knmohanta@gmail.com
98	CMFRI, Kochi	Dr P Shinoj, Sr Scientist Mob: 09495609723	pshinoj@gmail.com
99	DCFR, Bhimtal	Dr (Ms) Neetu Shahi, Scientist Biotechnology (Animal Sciences) Phone (O): 0594-2247279; Fax- 0594-2247693 Mob.: 9412866622	shahineetu@rediffmail.com neetuicar@gmail.com neetu.shashi@icar.gov.in;





S. No.	Institute/HQs	Details of HRD Nodal Officers	Email Id
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<b>AGRICULTURAL EXTENSION</b>			
101	DKMA, New Delhi	Sh S K Joshi, BM & Incharge, CeRA Phone (O): 011-25846010/25843657 Fax: 011-25843285; Mob.: 9810314506	bmicar@gmail.com incharge.cera@icar.org.in
102	ATARI, Ludhiana	Dr (Ms) Pragya Bhadauria, Scientist Phone (O): 0161-2401018; Fax: 0161-2412719; Mob.: 9592140932	pragyacari@gmail.com
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104	ATARI, Kanpur	Dr S K Dubey, Principal Scientist Phone (O): 0512-2533560 Fax: 0512-2554746; Mob.: 9936209925	skumar710@gmail.com
105	ATARI, Patna	Dr Anjani Kumar, Director Phone (O): 0612-2226950; Fax 0612-2226086 Mob.: 9811696364	ataripatna@gmail.com
106	ATARI, Kolkata	Dr S K Mondal, Principal Scientist Phone (O): 033-23352355; Fax: 033-23352355 Mob.: 9836488588	sk.mondal@icar.gov.in
107	ATARI, Guwahati	Dr R Bordoloi Principal Scientist & Incharge Administration Mob.: 9436337276	rmbshl@rediffmail.com;
108	ATARI, Barapani	Dr Rajumoni Bordoloi, Principal Scientist Phone (O): 0364-2570081; Fax: 0364-2570396; Mob.: 9436337276	rmbshl@rediffmail.com
109	ATARI, Pune	Dr Lakhan Singh, Director Phone (O): 020-25512665 Mob.: 7088994447, 9450128031	atari.pune@gmail.com
110	ATARI, Jabalpur	Dr S R K Singh, Principal Scientist (Ag Extn) Phone (O): 0761-2680807 Fax: 0761-2680485; Mob.: 9407338262	zcunit@rediffmail.com
111	ATARI, Hyderabad	Dr A Bhaskaran, Principal Scientist (Soil Sc) Phone (O): 040-24006502 Fax: 040-24533543; Mob.: 9443136102	a.bhaskaran@gmail.com
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113	ICAR HQs New Delhi	Dr N K Jain, Principal Scientist (HRM) Phone (O): 011-25842262 Ext 1315; Fax 011-25842179; Mob.: 8866089247	navin.jain@icar.gov.in nkjip1971@gmail.com



**INDIAN COUNCIL OF AGRICULTURAL RESEARCH  
KAB-II, Pusa, New Delhi**

**F.No.2-2/2015-HRM/20-132**

**Dated the 4<sup>th</sup> March, 2016**

To

The Director/Project Director of all Research Institutes/Project Directorates/ATARIs and National Research Centres.

**Sub.: Guidelines for HRD Nodal Officer for Training Functions Implementation**

Sir/Madam,

In order to facilitate effective implementation of training functions at the ICAR-Institutes for training and capacity building of employees of different categories, following guidelines have been formulated for HRD Nodal Officer for strict compliance by the Institutes:

- i. Identify a Principal Scientist as HRD Nodal Officer for the Institute and associate him/her with the PME Cell. In case of availability of only one or two Principal Scientist at the Institute, Senior Scientist may be nominated as Nodal Officer.
- ii. HRD Nodal Officer shall not be changed before 3 years unless there is very strong reason to do so. Moreover, it is desirable to get the consent of the Training Manager of ICAR i.e. ADG (HRM) for any such changes.
- iii. HRD Nodal Officer should not be over burdened with other responsibilities and should be allowed to focus on implementing training functions at the Institute.
- iv. Co-Nodal Officer may also be identified and associated with the HRD Nodal Officer for smooth coordination and implementation of HRD activities.
- v. A separate HRD Cell with basic infrastructure and manpower may be created in case of larger Institutes, where number of employees is more than 300.
- vi. HRD funds allocated to each Institute are exclusively for training of all categories of employees and should not be utilized for attending Seminar/ Symposium / Conference / AICRP Workshop, etc. All expenditures incurred in organizing training programme for ICAR employees or deputing employees for getting trained can be included under HRD head.



- vii. About 20-25% employees of each category should get the opportunity of training in a year, particularly who have not got opportunity in last 3-4 years, based on Training Need Assessment (TNA) and Annual Training Plan (ATP).
- viii. ATP for all categories of employees based on TNA shall be ready by 25<sup>th</sup> March and submit to Director, NAARM and ADG (HRM), ICAR HQs by 31<sup>st</sup> March of each year.
- ix. Half yearly report of physical and financial progress shall be submitted to ADG (HRM) by 10<sup>th</sup> October for the first half year (April-September) and by 10<sup>th</sup> April for the second half year (October-March).
- x. All training proposals should be processed by the HRD Nodal Officer only for seeking approval of the competent authority.
- xi. ATP for all categories be placed on the official website of the Institute as separate entity.

It is, therefore, requested you to ensure the implementation of above guidelines for effective coordination, implementation, monitoring and evaluation of trainings at the institute level.

This has the approval of Secretary, DARE & Director General, ICAR.

-Sd-  
(AK Vyas)  
ADG (HRM)

**Copy forwarded to:**

1. Sr.PPS to Secretary, DARE & DG, ICAR
2. PPS to Addl. Secretary, DARE & Secy., ICAR
3. PPS to Addl. Secretary & FA, DARE/ICAR
4. All DDGs, ICAR
5. Dy. Secy., Work Study, ICAR



**भारतीय कृषि अनुसंधान परिषद**  
**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**  
**कृषि अनुसंधान भवन-II, नई दिल्ली-110 012**  
**Krishi Anusandhan Bhawan-II, New Delhi-110 012**

F. No. 2-2/2015-HRM

Dated: 20.05.2016

**CIRCULAR**

**Sub.: General Points of Consideration for Smooth Implementation of Training Functions**

The Council has established HRM Unit at ICAR HQs with the objectives of overall coordination, monitoring, and implementation of HR policies, management of training needs as well as to evaluate and advice on all strategic HR needs and requirements of the Council. The HRM unit has been guiding and supporting the Institutes from time to time for effective and timely implementation of training functions. In order to bridge the gaps in organizing, coordination, implementation and monitoring of the training related activities based on systematic approach to training, following points are to be considered by the ICAR Institutes/HQs:

1. Training Need Assessment shall be done for all categories of employees by involving concerned employee, Reporting and Reviewing Officers, and HRD Nodal Officer of the Institute/HQs.
2. Only regular employees of ICAR of all categories should be part of Annual Training Plan (ATP) based on identified training needs.
3. Only 1-2 skill deficient areas relevant to the discipline/job/personality or leadership development are to be identified for an employee and reported in the prescribed format.
4. One employee shall not be given more than one training in a year normally, there may be exceptions due to emergent needs identified by the Director of the Institute. It should be ensured that the training acquired has been appropriately utilized before nominating for another training.
5. Normally 25% employees be considered for training in a year and another 25% employees be considered in next year.
6. Skilled Supporting Staff should also be included in the ATP along with the expected budget to be incurred during that particular year.
7. The trainings of SSS are to be organized either in the Institute itself or any other ICAR Institute located in the same City.
8. Proper format for submission of ATP and Physical and Financial achievements or prescribed format communicated from time to time shall be used.



9. No employee should be nominated to attend the training in the same area in which he/she has already undergone training during the last three years. However, he/she may be nominated for advance training course.
10. It is expected that trainings proposed in the ATP are as per HRD fund allocation and should not exceed the fund availability limits.
11. The ATP should be followed strictly. In case of emergent needs, the ATP may be suitably modified under intimation to HRM Unit, ICAR. However, organizing Institute of training reflected in the ATP may be changed with another suitably competent training Institute at the Institute level.
12. Less than 3 days training for any category shall not be promoted in general because training for capacity building in 1-2 days is not feasible.
13. HRD Nodal Officer is always expected to show the information to the Director and after having his/her approval mention in all communications sent to the Council that it has approval of the Director of the Institute, particularly whenever a new information is submitted to HQs.
14. HRD Nodal Officer should not be changed at least before a tenure of 3 years, as frequent changes hamper the development and progress of HRD activities of the Institute.
15. Every employee shall enter the training information in the ERP system within a week after completion of the training through individual Login ID and Password provided by IASRI, New Delhi. In case of any difficulty, contact at the mail and phone no.: icarerphelp@iasri.res.in, support.erp@iasri.res.in; 91-11- 25842274, 25842275, 25842276. TA/DA bills of employees' undergone training shall be processed only after confirmation of the entry of training details in the ERP system by the HRD Nodal Officer.
16. A brief note along with photographs of any kind of training organized by the Institute may be sent to Director, DKMA for placing on the ICAR website, with a copy to HRM Unit within 2-3 days of organizing the training.
17. The information in hard copy shall not be sent to HRM Unit until and unless it is specifically requested. The HRM Unit has almost achieved 100% paperless communication with the Institutes.

***'Save paper for the future and support Green and Clean India Drive'***

Sd/-  
(AK Vyas)  
ADG (HRM)

#### **Distribution:**

1. All Directors of Institutes
2. Deputy Secretary (TS & WS), ICAR HQs, New Delhi
3. Sr. PPS to Secretary, DARE & DG, ICAR, New Delhi
4. All HRD Nodal Officers of Institutes



**मानव संसाधन प्रबंधन एकक**  
**भारतीय कृषि अनुसंधान परिषद**  
**कृषि अनुसंधान भवन- II, पूसा, नई दिल्ली-110012**

No. 4-10/2016-HRM/157

Dated the 30<sup>th</sup> May, 2018

**OFFICE MEMORANDUM**

**Sub: Training costs/Budget plan for programmes to be organized by ICAR-Institutes for ICAR employees (from HRD Fund of ICAR-Institutes)**

The Competent Authority of ICAR has approved the Training costs/Budget plan for programmes to be organized by ICAR-Institutes for all the categories of ICAR employees from HRD fund of ICAR-Institutes in order to have uniform budgetary provisions throughout the ICAR system with the judicious and economic utilization of HRD fund of Organizing and Sponsoring Institutes. This is effective from the financial year 2016-17:

**Operational Head/Item of Expenditure**

Travel Cost	Rate	To be borne by
TA for participating trainees	Actuals as per entitlement	Sponsoring Institute of the trainee
DA for participating trainees	As per entitlement	-do-
POL including hiring of vehicle for educational tour/ study visit/field visit, etc. in case of non-availability of institute vehicle	Actuals	Organizing Institute of training
Boarding and Lodging		
Participating trainees	Actuals as per entitlement	Sponsoring Institute of the trainee
For outstation Non-ICAR Resource Persons/SAUs (if required)	Actuals	Organizing Institute of training
Training Materials		
Stationery and supply of supportive print and electronic literature, books, cost of detailed report, registration kit, etc. to be provided to the trainees	Up to Rs. 1000/- per trainee	Organizing Institute of training
Consumables (chemicals, raw materials, etc.)	Actuals	-do-





Travel Cost	Rate	To be borne by
<b>Resource person fee/Honorarium</b>		
In-house institute employee	Rs. 750/- per session of 75 minutes	Organizing Institute of training
External resource person (if required)	Rs. 1500/- per session of 75 minutes	-do-
*Programme Director (One) and *Programme Coordinator (s) (two)	Max. Rs. 5,500/- per programme: Programme Director:Rs 2500/- Programme Coordinator:Rs 1500/-	-do-
*All other Staff involved in organizing the programme (Secretarial/Clerical/Admin/Finance/Technical/Laboratory staff/class IV) (Max 8 persons)	Max. Rs. 4000/- per programme @ Rs 500/- per person	-do-
Session tea (2), & Working lunch, etc.	Rs 150/- per day per trainee (all taxes inclusive)	-do-
Inaugural session and valedictory function	Rs 100/- per trainee per function (all taxes inclusive)	-do-
Contingencies including payments for banner, certificate writing/printing, photographs, etc.	Actuals or 5% of total cost	-do-

*\*Ceiling of honorarium Rs. 2500/- per employee per annum and for higher than this amount up to Rs 5000/- with approval of Secretary, DARE and DG, ICAR following the guidelines for payment of honorarium under FR 46(b) laid down in O.M. No. 17011/9/85-Estt dated 23.12.85 issued by DoPT, New Delhi*

This issues with the financial concurrence I.D. No. AS&FA, DARE/ICAR No. 2275/F dated 25.05.2016.

Sd/-  
(AK Vyas)  
ADG (HRM)

#### **Distribution:**

1. All Institutes Directors
2. All DDGs, ICAR, New Delhi
3. Director (Finance), ICAR, New Delhi
4. PPS to Secretary, DARE & DG ICAR, New Delhi
5. PPS to AS & FA (DARE/ICAR), ICAR, New Delhi



Annexure - V

**मानव संसाधन प्रबंधन एकक**  
भारतीय कृषि अनुसंधान परिषद  
कृषि अनुसंधान भवन- II, पूसा, नई दिल्ली-110012

**F.No. 4-9/2015-HRM**

**Dated: 04<sup>th</sup> January, 2017**

**OFFICE MEMORANDUM**

Consequent upon approval of the Competent Authority of ICAR, I am directed to convey the decision for extending the facility of participating, maximum up to 10 participants (Technical staff/SMS) per training from SAUs/CAUs/ ICAR funded KVKs in various capacity building programmes to be organized by ICAR-Institutes by charging a nominal fee (including fixed and variable costs involved in organizing the training programme) as decided by the Director in consultation with the Administrative and Financial officials of the Training Organizing Institute without any financial liability on the part of ICAR with immediate effect. In all such training programmes, preference shall be given to the Technical staff of ICAR

This issue with the approval of Secretary, DARE and DG, ICAR, New Delhi

Sd/-  
**(N.K. Jain)**  
Principal Scientist (HRM)

**Copy to:**

1. All Directors of ICAR-Institutes
2. PSO to Secretary, DARE and DG, ICAR, New Delhi
3. ADG (HRM), ICAR HQs, New Delhi
4. DS (WS & TS), ICAR HQs, New Delhi
5. All HRD Nodal Officers of ICAR-Institutes



Annexure - VI

**मानव संसाधन प्रबंधन एकक**  
 भारतीय कृषि अनुसंधान परिषद  
 कृषि अनुसंधान भवन- II, पूसा, नई दिल्ली-110012

F.No. 4-9/2015-HRM

Dated: 28<sup>th</sup> June, 2017

**OFFICE MEMORANDUM**

Consequent upon approval of the Competent Authority of ICAR, it has been decided to extend the facility of participating, maximum up to 10 Scientific/teaching staffs per training from SAUs/CAUs/ICAR funded KVKs in various capacity building programmes to be organized by ICAR-Institutes for Scientific/teaching staff by charging a nominal fee (including fixed and variable costs involved in organizing the training programme) as decided by the Director of the Training Organizing Institute in consultation with the Administrative and Financial Officials, and Course Director without any financial liability on the part of ICAR-Institute with immediate effect. In all such training programmes, preference shall be given to the Scientific/teaching staff of ICAR and Scientific/teaching staff from SAUs/CAUs/ICAR funded KVKs shall be accommodated in case of vacant seats in a particular training programme.

This issue with the approval of Secretary, DARE and DG, ICAR, New Delhi

Sd/-  
**(N.K. Jain)**  
 Principal Scientist (HRM)

**Copy to:**

1. All Directors of ICAR-Institutes
2. PSO to Secretary, DARE and DG, ICAR, New Delhi
3. ADG (HRM), ICAR HQs, New Delhi
4. DS (WS & TS), ICAR HQs, New Delhi
5. All HRD Nodal Officers of ICAR-Institutes
6. Guard file.

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**

Krishi Anusandhan Bhavan-II, Pusa, New Delhi-110012

**F. No. HRM-3(5)/2018-KAB./159****Dated- 12.09.2018****OFFICE MEMORANDUM**

Sub.: Revised rates of Session Tea and Working Lunch as well as provision of TA for External Resource Persons for the Training Programmes organized from HRD fund of ICAR

In partial modification of earlier O.M. No. 04-10/2016-HRM/157 dated 30<sup>th</sup> May, 2016 of this office, the Competent Authority in ICAR has accorded approval of revision of rate of Session Tea (02) and Working Lunch as well as provision to TA for External Resource Persons (max 02) for the Training Programme to be organized from HRD fund of the ICAR-Institutes/HQs:-

Operational Head/Item of Expenditure	Existing rates of HRM Trainings (F/A)	Proposed rates for HRM Trainings
TA for External Resource person (not more than 02). Other External Resource Persons are to be arranged locally (if required)	Not existing	Limited to 2nd AC train/ Bus fare
Session Tea (2) & Working Lunch	Rs 150/- per day per trainee (all taxes inclusive)	Rs 225/- per day per trainee (all taxes inclusive)

This issue with the financial concurrence I.D. AS&FA (DARE/ICAR) No.1495/F dated 05.09.2018.

Sd/-

**(N. K. Jain)**

Principal Scientist (HRM)

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Annexure - VIII

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**  
KRISHI ANUSANDHAN BHAVAN-II, PUSA, NEW DELHI - 110 012

F.No.HRM-3(9)/2018-KAB./217

Dated : 11<sup>th</sup> Dec., 2018

**OFFICE MEMORANDUM**

**Subject: Field/exposure visit as an integral part of Training Programme for Skilled Support Staff (SSS)-reg.**

The Competent Authority of ICAR has approved the proposal of 1-2 days Field/exposure visit to the ICAR-Institutes in the training programme for Skilled Support Staff (SSS). The Field/exposure visit to the ICAR-Institutes should be within the same state, or nearby state in case of Delhi and NE States. The expenditure in this regard will be Rs.1000/- per person plus TA/DA and shall be met from the HRD Fund allocated to the ICAR Institutes/HQs.

This issues with the financial concurrence I.D.AS&FA(DARE/ICAR) Note No.40 dt. 6.12.2018.

Sd/-  
(AK Vyas)  
ADG (HRM)

**Distribution:-**

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**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**

KAB-II, PUSA, NEW DELHI

**HRM Unit****F. No. HRM-2(5)/2019-KAB./46****Dated: 22 April, 2019****NOTIFICATION**

The Governing Body of ICAR Society in its 246<sup>th</sup> meeting held on 12.02.2019 has approved following amendments in Clause 4.5.3.1 of nature and frequency of training and Clause 10.1 of Implementation and coordination in ICAR HRM Policy- Training and Capacity Building :-

S. No.	Clauses	Existing norm	Amended norm
1	Clause 4.5.3.1 (Level-3) of Nature and Frequency of training & Annexure III of Cadre Training Plan  (Page No. 36 & 49)	The CAO/ Deputy Secretary/ CF&AO/ Deputy Director (Finance)/ Director (OL)/ LA shall undergo in-country training of 03 weeks including field visits/ exposures.	The CAO/ Deputy Secretary/ CF&AO/ Deputy Director (Finance)/ Director (OL)/ LA shall undergo 3 weeks training out of which 01 week would be in the form of foreign component preferably in South East Asia. It is also decided that, the official concerned should submit a report on completion of the training including suggestions for action within the ICAR system.
2	Clause 10.1 of Implementation and Coordination  (Page No. 41)	A Training Board, chaired by the DG, ICAR shall be constituted to give overall direction for the implementation of this Policy. The Training Board include Secretary, ICAR, three DDGs (on rotation of three years), Director, ICAR-NAARM, Hyderabad, Joint Secretary (Training) DoPT, GoI as Member and ADG (HRM) as Member Secretary.	A Training Board, chaired by the DG, ICAR shall be constituted to give overall direction for the implementation of this Policy. The Training Board include Secretary, ICAR, AS&FA, DARE/ICAR, three DDGs (on rotation of three years), Director, ICAR-NAARM, Hyderabad, Joint Secretary (Training) DoPT, GoI as Member and ADG (HRM) as Member Secretary.

Sd/-  
(A K Vyas)  
ADG (HRM) &  
Training Manager, ICAR





### **Distribution:**

1. PSO to Secretary, DARE & DG, ICAR, New Delhi
2. PPS to Addl Secy. DARE & Secy. ICAR, New Delhi
3. PPS to AS&FA (DARE/ICAR), ICAR, New Delhi
4. All DDGs/ADGs of ICAR, New Delhi
5. Director on Special duty (Admn.)/ Director (Finance)/ Director (Per.)
6. All Directors of the ICAR Institutes/ NRC/ATARIs/PDs/Bureaux
7. All Project Coordinators of ICAR
8. DS (TS), ICAR, New Delhi
9. All Officers/ Sections at Krishi Bhawan, KAB-I/II, NASC, New Delhi
10. ICAR Portal
11. E-office notice board
12. Guard File.



**मानव संसाधन प्रबंधन एकक**  
भारतीय कृषि अनुसंधान परिषद  
कृषि अनुसंधान भवन- II, पूसा, नई दिल्ली-110012

**F.No.HRM-4(5)/2018-KAB./271**

**Dated 22 Nov., 2019**

**OFFICE MEMORANDUM**

**Sub: Non-charging of Course Fee for the training programmes to be organized by ICAR-NAARM, Hyderabad and other ICAR-Institutes from ICAR employees- reg.**

It has been decided by the Competent Authority that ICAR-NAARM, Hyderabad and other ICAR-Institutes shall follow the pattern of ISTM, DoPT, Govt. Of India, New Delhi and shall not charge any Course Fee from the ICAR Institutes/HQs for the participation of ICAR employees in the Training and Capacity Building Programmes. This will be effective with immediate effect.

This issues with the approval of Secretary, DARE & DG, ICAR.

Sd/-  
(A.K. Vyas)  
**ADG (HRM) &**  
Training Manager, ICAR

**Distribution:**

1. PSO to Secretary, DARE & DG, ICAR, New Delhi
2. PPS to Addl. Secy., DARE & Secy., ICAR, New Delhi.
3. PPS to AS & FA (DARE/ICAR), ICAR, New Delhi.
4. All DDGs/ADGs (Independent charge) of ICAR, New Delhi
5. Director (Admn.)/Director (Finance)/Director(Pers.)
6. All Directors of the ICAR Institutes/NRC/ATARIs/PDs/Bureaus
7. Dr. S.K. Soam, Joint Director, NAARM, Hyderabad.
8. All Project Coordinators of ICAR
9. DS (TS), ICAR, New Delhi
10. All Officers, Sections at Krishi Bhavan, KAB-I/II, NASC, New Delhi
11. ICAR Portal
12. E-office Notice Board
13. Guard File.



## Annexure - Xla

## Training Need Identification of Employees

## Training Need Areas for Scientific staff

S. No.	Identified Deficient area for training	No. of Scientists
1	Genomics and Functional Genomics	204
2	Bioinformatics	170
3	Research Management	167
4	Molecular Breeding Techniques	106
5	Statistical Data Analysis and Experimental Design	103
6	Leadership Development and Managerial Skills	92
7	Impact Assessment	78
8	Proteomics	74
9	Metabolomics	69
10	Nanotechnology	61
11	Next Generation Sequencing	53
12	Conservation Agriculture	52
13	Writing and Communication Skills	51
14	Marker Assisted Selection	44
15	Simulation Modeling	42
16	Pesticide Residue Analysis	39
17	Phenomics	38
18	Transgenics	38
19	Instrumentation Techniques	33
20	Metagenomics	33
21	Bio-control Agents	33
22	IPR Issues	32
23	Germplasm Characterization and Conservation	32
24	Taxonomy	32
25	Packaging Tools & Techniques	30
26	Human Resource Management	28
27	Computer Applications	27
28	Stress Management	27
29	Gender Issues and Mainstreaming	27



S. No.	Identified Deficient area for training	No. of Scientists
30	Decision Support System	27
31	PME Management	27
32	Precision Farming	26
33	Climate Change related issues	24
34	Biotechnological Tools and Approaches	24
35	C-sequestration	24
36	Mass Spectrometry Techniques	24
37	Project Management	23
38	Nutraceutical and Functional Foods	22
39	Functional Genomics	22
40	Scientific Writing and Editing	22
41	GIS Applications	21
42	Farming System Research and Modeling	20
43	Tissue Culture	19
44	Molecular Biological Techniques	18
45	Protected Cultivation	17
46	Stem Cell Technology	17
47	Advances in Crop Production	17
48	Isolation, Identification and Mass Multiplication of Native Bio-control Agents	16
49	Supply/Value Chain Management	16
50	Water and Nutrient Use Efficiency	15
51	Econometrics	15
52	Biodiversity Conservation and Management	15
53	Use of HPLC, GC-MS, LCMS, etc.	15
54	Seed Quality Issues	15
55	Advances in Organic Farming	14
56	Biotic and Abiotic Stress Management	14
57	Hyperspectral Remote Sensing and Thermal Imaging	14
58	Database Management & Digitization	14
59	Research Methodology	14
60	Genetic Resource Management	14
61	Nutrigenomics	14
62	Computational Biology	14



S. No.	Identified Deficient area for training	No. of Scientists
63	Phenotyping and related issues	14
64	Advances in Horticulture	13
65	Software Applications	13
66	PHT	13
67	Allele Mining	13
68	Advances in Modeling and Climate Change Studies	12
69	Entrepreneurship Development	12
70	Advances in Breeding Techniques	12
71	Bio-safety Issues	12
72	Gene Expression Regulation and Silencing	12
73	SNP Genotyping	12
74	ICT Applications	11
75	Double Haploid Production	11
76	Haploid and related issues	11
77	Electron Microscopy	11
78	Advances in Water Management in Crops	11
79	Soil & Water Conservation and Watershed Management	11
80	Advanced Soil Survey Techniques	11
81	Microscopy Techniques	10
82	High Throughput Analysis	10
83	Transcriptomics	10
84	Epidemiology and Disease Surveillance	10
85	Biosensor Applications	10
86	Extension Methodologies	10
87	Web Page Development	10
88	Knowledge Management	9
89	Extension Methodologies	9
90	CAD	9
91	FMS/MIS	8
92	DNA Barcoding and Fingerprinting	8
93	Fermentation Technology	8
94	Disease Forecasting	8
95	Chemical Ecology and related aspects	8

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## Annexure - Xlb

## Training Need Areas for Technical Staff

S. No.	Identified Deficient area for training	No. of Technical Staff
1	Computer Application and MS Office	373
2	Farm Management	184
3	Farm Machinery & Implements- Maintenance and Repair	70
4	Statistical Data Analysis	68
5	Fish Biology Studies and Protocols	65
6	Lab/ Field Equipments Handling and Maintenance	62
7	ERP (MIS/FMS)	60
8	Instrumentation Techniques	58
9	Survey Methods and Data Entry Techniques	43
10	Tobacco Field Crop Management	43
11	Procurement of Farm Stores and Disposal Off Farm Produce	42
12	Personality Development	41
13	Data Collection	40
14	Labour Management	39
15	Vehicle Maintenance	39
16	Stress Management	36
17	Seed Production Techniques	36
18	GIS and Remote Sensing	35
19	Good Laboratory Practices	34
20	Human Resource Management	32
21	Competency Enhancement Programme	28
22	Auto CAD/CAD Design	25
23	Dairy Management	24
24	Web Designing	22
25	Molecular Microbiology	22
26	e-Library, KOHA (Library Programme)	22
27	Identification of Vectors/Foliar Symptoms of New Pathogens and their Surveillance at Farm Level	21
28	Water Quality Parameters Analysis	21
29	Data Base Management System	20
30	Scientific Photography & Videography	19



S. No.	Identified Deficient area for training	No. of Technical Staff
31	Taxonomy and Statistical Tools	18
32	Cyber Security	18
33	Communication Skills	18
34	Microbiological Analysis of Seafoods	17
35	Designing and Layout of Field Experiments	15
36	Meteorology & Meteorological Data Management	15
37	Climate Change Influence on Physiological Parameters	15
38	PME Management	14
39	Soil Survey and Land Evaluation	13
40	Driving Skill Improvement	11
41	Translation and Editing in Hindi/English Technical Reports	11
42	Soil & Water Analysis	9
43	ICT in Agriculture	8
44	Sample Handling & Processing	8
45	HPLC and GC- Operational, Preventive and Corrective Measures	7
46	Application of Mass Spectrometry in Food Analysis	7
47	Packaging Technology	6
48	Tube well Operation and Maintenance	6
49	Bio-safety Measures in Disease Investigation Laboratory	5
50	Post-harvest Technologies	5
51	Biotechnological Tools	4
52	Breeding and Culture of Ornamental Fishes	4
53	Nursery and Plantation Technique	4
54	Agriculture Extension Techniques	4
55	Phytoplankton, Zooplankton & Benthos: Analysis and Culture Techniques	4



## Annexure - Xlc

## Training Need Areas for Administrative Staff

S. No.	Identified Deficient area for training	No. of Admin. Staff
1	e-Tendering and e-Procurement/Public Procurement	200
2	FMS/MIS/ERP	199
3	Payroll and Pay Fixation	188
4	Computer Proficiency	150
5	Noting and Drafting	109
6	Office Automation	103
7	Store Management	99
8	Income Tax related aspects	79
9	Establishment & Recruitment Rules	65
10	Pension and Retirement related issues	60
11	Service Matter related issues	59
12	RTI related aspects	58
13	Personality Development and Behaviour Skills	57
14	Establishment and Financial Matters	52
15	Budget related aspects	47
16	Communication Skills	47
17	Court Cases and Legal Issues	41
18	Reservation in Service for SC/ST/OBC	40
19	Office Management	35
20	Record Management	32
21	GFR related aspects	30
22	Vigilance related matter	28
23	New Pension System	27
24	Stock, Assets Register and Office Records	23
25	Team Work	22
26	Rajbhasa Implementation	20
27	Leadership and Management Skills	19
28	ICT Tools	17
29	Contract Management	16
30	Work Planning Skills	16
31	CCS (CCA) Conduct Rules	15



S. No.	Identified Deficient area for training	No. of Admin. Staff
32	Audit & Accounts related aspects	12
33	Administrative Matter	10
34	Condemnation of Articles	10
35	Stress Management	9
36	FRSR	9
37	Role of IO/PO	4
38	Contingency/Fellowship related aspects	4
39	e-Office (governance)	4



## Annexure - XId

## Training Need Areas for Skilled Support Staff (SSS)

S. No.	Identified Deficient area for training	No. of SSS
1	Field Operations and Maintenance	250
2	Diary and Dispatch	181
3	Nursery Techniques and Management	179
4	Motivation	120
5	Laboratory Maintenance Techniques	107
6	Xerox/Photocopy	100
7	MS Office /Basic Computer Literacy	98
8	Office record keeping and maintenance of files	97
9	Document Binding	85
10	Personality Development	85
11	Office Support Services	66
12	Reading and Writing in Hindi	44
13	Plant Sampling and Processing	43
14	Interpersonal Skills and Stress Management	35
15	Workshop Maintenance	35
16	Livestock Management	32
17	Glass House Maintenance	28
18	Developing Communication Skills	28
19	Fertilizer Application Techniques	24
20	Office Building Safety	23
21	Orchard Management	23
22	Reading and Writing in English	21
23	First Aid and Fire Fighting	20
24	Service Rules Awareness	14
25	Spraying Techniques of Insecticides	14
26	Fish Biology and Sampling Methods	11
27	Plant Protection Measures and related works	11
28	Operation and Maintenance of Drip Irrigation System	11
29	Hatchery Management	11
30	Gene Bank Maintenance	7
31.	ERP System	7



## List of Master Trainers with Areas of Specialization for Imparting Training to Administrative and Finance Staff

S. No.	Name & Designation	Institute / HQs.	Areas of Specialization
1.	Sh Pushpanayak CAO	ICAR Res. Complex for Eastern Region, Patna	i. Establishment Matters ii. Supply Chain Management iii. Capacity Building: Design of Training, Implementation & Evaluation Theory & Related Issues
2.	Sh Pradeep Kumar Singh SF&AO	IISWC, Dehradun	i. Procurement of Works ii. Procurement of Goods iii. Procurement of Library Books & Journals
3.	Sh Firoz Khan SAO/US	IVRI, Izatnagar	i. Public Procurement Policy (GFR-2017) ii. Stress Management and Time Management iii. GeM iv. Procurement of Works
4.	Sh Sushil Kumar Singh SAO	CIARI, Port Blair	i. Service Matters including Rules and Bye-laws of ICAR Society ii. Establishment Rules iii. Departmental Proceedings - Complete Process iv. GFR 2017 with special emphasis on public procurement of works, Goods & Services v. Legal cases & RTI with special emphasis on drafting of comments / replies
5.	Sh Indra Bhushan Kumar SAO	CIFA, Bhubaneswar	i. Reservation in Government Service ii. RTI iii. Noting & Drafting iv. Disciplinary Proceedings v. Record Management
6.	Sh Kumar Rajesh CAO	CIAE, Bhopal	i. Procurement Procedures ii. GEM iii. World Bank Procurement Guideline
7.	Sh Vampad Sharma US	ICAR HQs., New Delhi	i. Establishment matters / service rules (Recruitment, Promotion, rosters etc) Specifically ARS cadre ii. Legal matters, RTI, CPGRAM, Complaint handling iii. Disciplinary matter / Disciplinary Proceedings
8.	Ms Suparna Dasgupta US	ICAR HQs., New Delhi	i. ICAR Technical Service Rules ii. RTI iii. Prevention of Sexual Harassment at Workplace iv. Leave Rules





S. No.	Name & Designation	Institute / HQs.	Areas of Specialization
9.	Ms Rajashree Sunil US	ICAR HQs., New Delhi	i. Modified Assured Career Progression scheme ii. Pay fixation iii. Prevention of Sexual Harassment at workplace iv. Noting and Drafting
10.	Dr Pankaj Kumar CAO	CPRI, Shimla	i. Contract labour Management ii. Human Resource Management iii. Public policy and Governance
11.	Sh Navin Kumar Jha SAO	NINFET, Kolkata	i. Purchase procedure i. Execution of works in ICAR i. Assessment of scientific & Technical Employee of ICAR
12.	Sh Sandeep Singh Dudi AO	CPRI, Shimla	i. Procurement (Specially with reference to new GE, permeant purchase manual, GeM / E Procurement) ii. Ethics in Administration iii. Security aspects including Disaster Management & Cyber Security
13.	Sh Saroj Kumar Singh SAO	IISR, Lucknow	i. Establishment Rules including FRSR ii. Procurement Procedure in ICAR iii. Implementation of e-Office iv. Disciplinary Proceedings.
14.	Ms Neha Agarwal AO	NIAP, New Delhi	i. Engaging Team for improved performance ii. Conflict Management & Negotiation skills iii. Emotional Quotient iv. Motivation v. Effective Communication at workplace
15.	Sh Kunal Kalra F&AO	NDRI, Karnal	i. Overview of PFM's ii. Financial Management iii. Implications of GST
16.	Sh Gauranga Ghosh F&AO	CRIJAF, Kolkata	i. Training on Procurement of goods under GFR 2017 (including GeM and E-Procurement) ii. Accrual Accounting (Double entry system) iii. Workshop for implementation of e-office iv. Workshop for implementation of PFMS
17.	Sh Sunil Kumar Das F&AO	NRRI, Cuttack	i. Pension & Retirement Benefits ii. Accrual Accounting iii. Procurement of Goods.
18.	Sh A K Maheswari SF&AO	ICAR-CTRI, Rajahmundry	i. Calculation of Retirement benefits ii. Personal claims (Medical, T.A) iii. Bank reconciliation & cash book writing



S. No.	Name & Designation	Institute / HQs.	Areas of Specialization
19.	Sh Sanjay Rastogi SO	ICAR HQs., New Delhi	i. Retirement and Pensionary Benefits ii. Administrative Vigilance: Role of IO / PO iii. Preventive Vigilance
20.	Sh Umesh Gahlot SO	ICAR HQs., New Delhi	i. Pay fixation including latest changes as per 7th CPC ii. Leave Travel concessions (LTC) iii. Travelling allowance (TA) including TTA iv. Pay & Allowances
21.	Sh S Bala Kamesh AF&AO	ATARI, Hyderabad	i. Public Financial Management System (PFMS) ii. Financial Management in ICAR iii. Pension & Retirement Benefits
22.	Sh Ashit Biswas AF&AO	ATARI, Umiam, Meghalaya	i. Accounts, Finance & Auditing (with recent e-initiatives) PFMS, Care Management System, ii. Accrual System of accounting, Double entry system of accounting iii. Stores & Purchase Management iv. Direct and indirect Taxation



## Annexure-XIII

**Training Impact Assessment Proforma**

(After at least 6 months of attending the training)

(Developed by DoPT &amp; modified with the feedback of Domain Specific Experts of ICAR)

**Name of Employee** :  
**Designation** :  
**Place of Posting** :  
**Title of Training** :  
**(only 1 training attended)**  
**Training organization** :  
**Dates of Training** :  
**Age** :  
**Gender** :  
**Year of Experience** :

**Feedback by the TRAINEE on the impact of Training on his/her job****Rating Scale**

1: To the Least Extent, 2: To Some Extent, 3: To a Considerable Extent, 4: To a Great Extent, 5: To the Greatest Extent

S. No.	Parameter	Rating (Rating as per the above Scale)	Remarks (Any related remarks)
1.	To what extent did the said training address your training needs?		
2.	To what extent can you relate the learning of the training to your job?		
3.	To what extent are you able to apply the learning of the said training in your job?		
4.	To what extent did the training help you to improve your job performance?		
5.	To what extent has been the improvement in your job performance, when you compare the pre-training scenario and the post- training scenario?		



S. No.	Parameter	Rating (Rating as per the above Scale)	Remarks (Any related remarks)
	Question	Answers (Relevant answer to the question beside )	
1.	Has there been required learning derived from the said training program?		
2.	Have been there any other factors that inhibited you from applying in your job, the learning derived from the said training? If so, what are they?		
3.	What are your suggestions to effectively improve the application of learning from the said training?		
4.	What are the major improvement in your job performance, after attending the said training?		
5.	The individual/ as well as team performance has improved since attending the training.	Yes /No	
6.	Mention one area improved the most		
7.	Noticeable fewer errors are being committed and more accuracy has been achieved.	Yes /No	
8.	The required skill to perform a specialized task has been achieved.	Yes /No	
9.	There is a visible change in quality commitment compared to the pre-training period.	Yes /No	
10.	Any other remarks you wish to make?		

Name & Signature of Employee



### Feedback by the TRAINEE'S SUPERVISOR (REPORTING OFFICER) on the impact of Training on his/her job

#### Rating Scale

1: To the Least Extent, 2: To Some Extent, 3: To a Considerable Extent, 4: To a Great Extent, 5: To the Greatest Extent

S. No.	Parameter	Rating (Rating as per the above Scale)	Remarks (Any related remarks)
1.	To what extent did the said training address the trainee's training needs?		
2.	To what extent in the trainee able to relate the learning of the training to the job?		
3.	To what extent is the trainee able to apply the learning of the said training in the job?		
4.	To what extent did the training help the trainee to improve his/her job performance?		
5.	To what extent has been the improvement in the trainee's job performance, when you compare the pre-training and the post- training scenarios?		
	<b>Question</b>	<b>Answers</b> (Relevant answer to the question beside )	
6.	Has there been other factors that inhibited trainee from applying the learning in his/her job? If so, what are they?		
7.	What are you suggestions to effectively improve the application of learning from the said training?		
8.	What are the major improvements in the trainee's job performance, after attending the said training?		
9.	He/ She has been applying the learning from the training programme.		Yes / No
10.	He/ She has been actively looking for a scope to apply the learning from the training programme.		Yes / No
11.	There are off course noticeable changes in post-training work accomplishment behaviour.		Yes / No



12.	There is a visible change in confidence of the trainee.	Yes / No
13.	The individual/ as well as team performance has improved since attending the training.	Yes /No
14.	Mention one area improved the most	-----
15.	Noticeable fewer errors are being committed and more accuracy has been achieved.	Yes /No
16.	The required skill to perform a specialized task has been achieved.	Yes /No
17.	There is a visible change in quality commitment compared to the pre-training period.	Yes /No
18.	Any other remarks you wish to make?	

Signature of Reporting Officer

Name:

Designation:

Date:





## Peer-reviewed published article on effectiveness of trainings conducted by ICAR

*Indian Journal of Agricultural Sciences* 90(5): 1014-19.

### Assessment of effectiveness of trainings conducted by ICAR

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Received: 13 January 2020; Accepted: 16 March 2020

#### ABSTRACT

Training is essential not only to increase productivity, but also to keep workers of an organization motivated and inspired. In this study, the effectiveness of trainings conducted by Indian Council of Agricultural Research (ICAR) during 2017-18 in which 901 Scientists, 506 Technical, 519 Administrative and 313 Skilled Support Staff (SSS) from 106 ICAR-Institutes across 26 States/UTs participated was assessed by HRM Unit, ICAR HQs, New Delhi during 2018-19. Study revealed that the pooled perceived training effectiveness index (PTEI) was 3.86, referring medium effectiveness of trainings. The mean PTEI score was the highest for SSS (3.94) followed by Administrative staff (3.90). Overall, most of the participants (58.83%) reported medium degree of effectiveness of the training programmes. Behavioural changes and changes in practices as a consequence of exposure to the trainings are evident from the findings. The study revealed that perceived effectiveness was significantly associated with age, gender and duration of training programmes. Some observed constraints by the trainees were inadequate infrastructure at Institutes, sometimes lesser relevancy of few topics and lack of practical exposure. The major suggestions were inclusion of more practical sessions, follow up programmes for trainee-trainer meet, and increasing the duration of the trainings in few cases. The trainings organised by ICAR should continue for all staff categories to bring about desirable changes in competencies.

**Key words:** Effectiveness, Human Resource Management, Organisation development training

The survival of an organisation implies examination of sustainable competitive advantages. The desired knowledge, skills and attitude/behaviour of an organisation's employees have become increasingly important to its performance, competitiveness and advancement. The rapid pace of advancements demands specific skill sets needed to perform a task efficiently with optimum use of resources. To adapt to the changing job needs and organizational goals, training is must. To remain competitive, organizations must ensure that their workforce continually learns and develops. Organisations invest in training because they believe a skilled workforce represents a competitive advantage. Participation in knowledge sharing forums and training programmes are important determinants of performance (Paul *et al.* 2016a). Meta-analysis integrating a large number of empirical studies across various training topics from manager trainings to team trainings, cross-cultural trainings, and all forms of employee trainings consistently show that when training is designed systematically and based on the science of learning, it yields positive results (Arthur *et al.* 1998). The productivity cycle is driven by knowledge, innovation, and creativity – all of which come from employees. A creative and dynamic organizational environment foster individual creativity, and

thereby helps to bring about innovations (Paul *et al.* 2017). Training is one such tool to keep the organizational human resources abreast with recent technological breakthroughs and knowledge, therefore, employers must strive to actively manage organizational human resources by investing in training (Salas *et al.* 2012).

Every aspect and activity in an organisation involves people. For instance, manager will not be successful if he has staff who are not well equipped with Skills, Knowledge, Ability, and Competence (SKAC) (Engetou 2017). Specific job skills, ability, knowledge and competence needed in the workplace are not efficiently taught in the formal education. As such, most employees need extensive training to ensure the necessary SKAC to bring out substantive contribution towards the Council's growth. In other words, training must be viewed as a long term process, not just an infrequent or haphazard event. Hence, the present study was undertaken.

#### MATERIALS AND METHODS

ICAR initiated trainings for all categories of staff from 2016-17 based on Training Need Analysis (TNA). The present study was conducted with cross-sectional data (2017-18) on trainees' and his/her Supervisors' feedback collected by HRM Unit, ICAR HQs, New Delhi from 106 ICAR-Institutes across 26 States/UTs during 2018-19. About 2239 staff had attended trainings during 2017-18 but 1782 had responded to the questionnaire (properly filled). A complete

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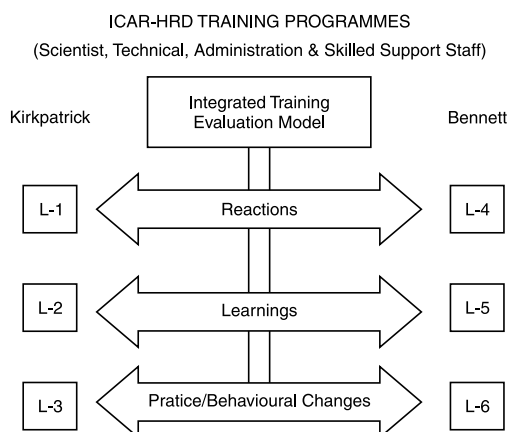
enumeration was done with the feedback of 901 Scientists, 506 Technical, 519 Administrative, and 313 Skilled Support Staff (SSS). So, the sampling frame comprised 1782 ICAR employees who had undergone training programme(s) during 2017-18 organized by competent ICAR/Non-ICAR Institutes in India. Subject Matter Division (SMD)-wise and staff category-wise data were accessed for analysis.

Perceived training effectiveness (PTE) was measured after developing a PTE Index (PTEI) which comprised four different indicators (i) perceived degree of need satisfied through training programme attended (20%), (ii) perceived degree of application of the learning to present job (30%), (iii) perceived degree of enhancement that may take place in job performance over a period of time (40%), and (iv) supervisor's rating regarding performance of the participant after attending training programme (10%). The experts' judgment approach for weight assignment was adopted in the present study for the following two reasons: (i) it is a simple yet powerful method, hence widely used method of weight assignment (Paul *et al.*, 2015), (ii) it is not influenced by the data structure. The finally constructed perceived effectiveness index was as follows:

$$\text{Effectiveness Index} = \frac{\sum (W_i * I_{ij})}{\sum W_i}$$

where  $W_i$ , Weight of the  $i^{\text{th}}$  indicator;  $I_{ij}$ , Rating given by  $j^{\text{th}}$  trainee for  $i^{\text{th}}$  indicator.

Different descriptive and inferential statistics were used for analysing the data using the statistical language programming software R. The Kirkpatrick four level Training Evaluation model (Kirkpatrick and Kirkpatrick 2009) is designed to objectively evaluate training. It is probably the best known model for evaluating the results of training. Another popular tested model for evaluating trainings is the Bennett's hierarchy of evaluation (Bennett 1979). An integrated Model (Kirkpatrick and Bennett) was used here for further insights on training evaluation. Since higher level impacts on organization cannot be documented at this stage so the basic 3 levels were used which are



common in the two models.

## RESULTS AND DISCUSSION

**General profile of the respondents:** In this study, the total number of respondents were 2239, out of which there were 40.24% Scientists, 22.59% Technical, 23.17% Administrative and 13.97% SSS, respectively. In trainee Scientist, there were 69.75% males and 30.25% females with an experience of 6 months to 35 years where the majority had 20 years' experience. Around 13.76% trainee Scientists were below 30 years, 45.94% between 30-45 years and 18.75% were above 45 years of age group. For Scientist, the average training duration was of 21 days. Among the Technical staff trainees, 73.25% were males and 26.75% were females with an experience of 3-20 years. Amongst all of them, 30.50% were below 30 years, 47.75% were under 30-45 and 21.75% were above 45 years. The average duration of training conducted for Technical staff was between 1-60 days with a majority of 5-days trainings. Administrative staff comprised 66.99% of males and 33.11% females respondents. Around 14.07% of them were under 30 years, 71.60% were under 30-45 years and 14.3 % were above 45 years. The duration of the training was between 1-30 days with a majority of 2 days only. In SSS category, total number of respondents was 313 and amongst them there were 65.25% males and 34.74% females, having experience of 1-40 years with majority of them having experience around 29 years. The age group of SSS was found to be 46.18% below 30 years, 31.35% between 30-45 years and 22.45% above 45 years. The duration of the training for SSS was between 1-3 days with a majority of one-day training only.

**Perceived effectiveness of training programmes and its correlates:** The PTEI gives us an elementary idea about how did the participants of the training programmes perceive the usefulness and importance of the training programmes they participated could match to their job requirements. Therefore, it will be misleading to judge the quality of the training programmes merely through the PTEI scores. Moreover, the index should not be confused as a measure of outcome or impact of the training programmes organized, as it only serves as a reaction capturing tool – an instrument to understand the immediate response and the direction of trainees' perceptions regarding the relevance of the content to suit the requirements of improved job performance as perceived by them. The Subject Matter Division (SMD) wise distribution of mean effectiveness scores of Scientists showed that it was the highest in case of Agricultural Engineering (3.98), followed by Animal Science (3.87) while lowest in Agricultural Extension Division (3.72). The average PTEI score of the pooled sample was 3.82. The PTEI scores calculated for staff other than Scientists (Technical, Administrative, and Skilled Support) showed that it was the highest in Fisheries Science (4.16), followed by Crop Science (4.04). The average PTEI score of the pooled sample was 3.86. There may be various factors governing the perception of Scientist, Technical, Administrative,



and SSS regarding the training programmes undergone in different ICAR Institutes. Some factors are organizational like infrastructure, training design, training environment, physical facilities, boarding and lodging facilities, etc. which directly contribute towards development of a specific kind of perception among the trainees. The intrinsic factors like age, sex, marital status, self-confidence, and learning ability which also determine their perception regarding training effectiveness, should not be overlooked (Gist *et al.* 1991). Empirical studies show mixed results on association of perceived effectiveness with trainee's characteristics. In our study, we found that perceived effectiveness was positively and significantly associated with age, gender, and duration of training programme while it was negatively and significantly associated with experience (Table 1).

Both the models have explained 97% of variation in effectiveness index of training for the participants and the model were good fit and statistically significant based on F value at 1% level. It is interesting to note from the two models that the experience of the trainee (-0.007 and -0.011) is having negative influence on the effectiveness index. The gender also found to be significantly influencing the effectiveness index as the effectiveness index for male participants is higher than female participants by 0.087 and 0.077, respectively in model 1 and 2 (Table 1). The duration of training programme and age of the participant were also

found positively influencing the effectiveness index.

We also found that perceived effectiveness was strongly associated with all the SMDs and all the staff categories. One of the earliest models designed in this regard opined that performance is a function of abilities, traits, efforts and role perception (Lawler and Suttle 1973). The model is useful in understanding the reasons behind differential outcomes among trainees with respect to their learning, behaviour change, and improvement in performance. The training courses offered by the ICAR are of varying duration and types, having different objectives to fulfil various kinds of needs. The Scientist generally choose the courses based upon their needs including learning new methods, techniques and skills to perform a specific kind of job, knowledge enrichment, and career advancement. The Technical, Administrative and SSS on the other hand, are often instructed by their superiors to attend a particular training programme to support the Scientist in proper execution of Technical programme. Individuals who engage in greater self-exploration are more likely to know their strengths and weaknesses, it follows that individuals who engage in more career planning are more likely to perceive the potential benefits of training (Mathieu *et al.* 2000). Self-motivation plays an important role in sustaining the urge of learning, as Maier (1973) rightly pointed out that possessing prerequisite skill does not guarantee performance if motivation is low

Table 1 Influence of key independent variables on effectiveness index of various categories of staff

Subject Matter Divisions as dummy				Staff category as dummy			
Variables	Coefficients	Standard Error	t Stat	Variables	Coefficients	Standard Error	t Stat
Age (yrs)	0.007*	0.003	2.105	Age (yrs)	0.008*	0.003	2.502
Experience (yrs)	-0.007*	0.003	-2.503	Experience (yrs)	-0.011**	0.003	-3.773
Gender (Male = 1, Otherwise = 0)	0.087*	0.038	2.263	Gender (Male =1, Otherwise = 0)	0.077*	0.039	1.967
Duration	0.003*	0.001	2.295	Duration	0.004**	0.001	3.262
Crop Science=1, Otherwise = 0	3.695**	0.116	31.870	Scientist = 1, Otherwise = 0	3.520**	0.118	29.799
Horticulture Science = 1, Otherwise =0	3.403**	0.114	29.797	Technical = 1, Otherwise = 0	3.584**	0.127	28.308
NRM = 1, Otherwise =0	3.541**	0.122	29.044	Administrative = 1, Otherwise =0	3.707**	0.119	31.282
Agricultural Engineering = 1, Otherwise = 0	3.489**	0.124	28.032	SSS= 1, Otherwise = 0	3.687**	0.139	26.460
Agricultural Education = 1, Otherwise = 0	3.412**	0.170	20.035				
Animal Science = 1, Otherwise = 0	3.599**	0.119	30.145				
Fisheries Science = 1, Otherwise = 0	3.766**	0.114	32.985				
Agricultural Extension = 1, Otherwise = 0	3.559**	0.170	20.905				
R Square = 0.97; F value = 5347.10**; N = 1782				R Square = 0.97; F value = 7819.85**; N = 1782			

\*\*Significant at 1%, \* Significant at 5%

or absent. Paul *et al.* (2016b) reported that participation in training and workshop contributes significantly high in performance of agricultural Scientist. Finally, Noe (2000) described how trainees' attributes and attitudes influence the effectiveness of a training programme. While segregating the results staff category wise, we found that as high as 96% Scientists, 95% Technical, 93% Administrative, and 97% SSS had found the training courses attended effective in deriving required learning. The mean PTEI score was the highest for SSS (3.94), followed by Administrative (3.90). The mean PTEI score of the pooled sample was 3.86.

The Scientists of ICAR normally undergo numerous training programmes of varying durations like job-induction courses, foundation courses and refresher courses. The present study makes use of cross-sectional data, therefore, the results of the analysis is representative of a single training programme participated at a certain point of time. The participating staff of the training programmes had undergone the programme at a certain professional stage. Therefore, perception of effectiveness regarding a specific training programme was definitely influenced by pre-exposure and experience in attending such training programmes. Participants attending training programme which is the second and so on for him or her, had an opportunity of mentally comparing various aspects of the current programme (reported upon) with the others attended in the past. Lesser the number of exposures more may be the perceived effectiveness of a training programme as evident from the findings. The mean PTEI score was the highest for SSS who generally attend training programmes on rare occasions. On the other hand, the mean perceived effectiveness score was the lowest for Scientist who keeps on attending different types of capacity building programmes including training, seminar, workshop, conference, and group meetings, etc. generally at a frequent interval. Such frequent exposure to various kinds of programmes might have resulted in development of a less sensitive perception of effectiveness amongst the Scientist about the training programme reported upon.

A cluster analysis was undertaken to group the participants in such a way that participants in the same

group (called a cluster) are more similar in some sense to each other than to those in other clusters. Clustering was done SMD wise, followed by staff category wise. A majority of the participants from the SMDs - Crop Science (54.06%), Agricultural Engineering (65.29%), Animal Science (42.97%), Fisheries Science (44.03%), and Agricultural Extension (42.86%) attached a medium level of effectiveness to the training programmes. A majority of the participants from Horticultural Science (42.86%) and Agricultural Education (42.11%) attached high level of effectiveness to the training programmes. Exceptionally, the majority (35.61%) of the participants from Natural Resource Management attached only a low level of effectiveness to training programmes participated by them. Analysing the data staff category wise, we found that most of the Scientists (51.11%), Technical (53.23%), and Administrative (57.93%) staff found medium effectiveness whereas, a majority (41.82%) of the SSS reported high effectiveness of the training programmes, they participated. Overall, a majority (58.83%) of the participants from pooled sample reported medium degree of effectiveness of the training programmes.

The level of improvements of all the trainee-scientists is given for the Integrated Training Evaluation model and it was found that maximum number of Scientists perceived that they had enhancement in learning in the form of Knowledge, Skill and Understanding (Table 2). Their supervisors also perceived a significant positive change in them after the trainings. Hence, it is evident that majority of the Scientists trained were in the level 2 which depicts changes in their knowledge, skill and understanding (Table 2). There were also 17.14 and 13% of Scientists who were in the higher levels (level 3) which shows the effectiveness of the trainings in terms of real changes in behaviours and practices. The level of improvements of Technical staff was found to be around 45.77%, which shows that the trainings have helped them in learning as knowledge gain, skill enhancement, and understanding (Table 2), whereas about 30% of them perceived that there was a behavioural change after the training and the same was in line with the perception of their supervisors as well (38.26%). Majority (41.89%) of the

Table 2 Self and supervisor reported levels of improvements of trainees

Level of improvement	Scientists (n=840)		Technical staff (n= 426)		Administrative Staff (n = 456)		SSS (n=175)	
	Self- reported frequency and %	Supervisor reported frequency and %	Self- reported frequency and %	Supervisor reported frequency and %	Self- reported frequency and %	Supervisor reported frequency and %	Self- reported frequency and %	Supervisor reported frequency and %
Level 1: Reaction (Feelings)	204 (24.29)	229 (27.26)	69 (16.20)	40 (9.39)	40 (8.77)	12 (2.63)	31 (11.97)	27 (10.42)
Level 2: Learning (Knowledge, Skill and Understanding)	312 (37.14)	197 (23.45)	195 (45.77)	147 (34.51)	155 (33.99)	142 (31.14)	96 (37.07)	133 (51.35)
Level 3: Behaviour change (Practice)	144 (17.14)	109 (12.98)	129 (30.28)	163 (38.26)	191 (41.89)	247 (54.17)	83 (32.05)	70 (27.03)





Table 3 Prioritizing suggestions offered by Scientists for improvement of the training programme (n=840)

Suggestions	Frequency and % of Scientists reporting the item	Rank
Making necessary software available for hands-on and follow up	19 (2.26)	VII
Inclusion of adequate Technical knowledge in course content	43 (5.12)	V
Inclusion of adequate practical and hands-on exercises	178 (21.19)	I
Development of adequate infrastructure including proper boarding and lodging facilities, resources, and staff in the organizing institute	57 (6.79)	III
Longer duration courses will be effective to develop a comprehensive understanding in the subject	55 (6.55)	IV
Content should be specific, avoiding unnecessary coverage of a wider range	32 (3.81)	VI
Initiatives by ICAR for development of short-duration content specific network projects based upon the specific learnings offered, and involving the same team of trainees in the projects for generation of quality data in the particular area	7 (0.83)	VIII
Follow up programmes for sustainable trainer-trainee interactions	97 (11.55)	II

Administrative staff trainees perceived that they underwent some behavioural change after the training and the same was in line with the perception of their supervisors as well (54.17%) (Table 2). Thus, it is very much evident that higher level changes are perceived and reported by both the Administrative staff and their supervisors. Most of the SSS (37.07%) perceived that there was enhancement in their learning after the training and same was observed by their supervisors (51.35%) (Table 2).

*Perceived constraints and suggestions:* According to Wakely (1997), the role of constraints and suggestions in capacity building programmes goes well beyond the traditional conduct of training. This needs assessment or the design of performance improvement programmes, which tend to be static and merely concerned with the needs for training to meet continuous suggestions and ruling out outdated objectives and targets. The major constraints observed by participating Scientists was inadequate facilities at their institute (5.60%) followed by unavailability of soft wares, lack of practical exposure and technological knowledge provided. However, the majority of scientist trainees did not experience any constraint. Similar reasons were reported by Mullen *et al.* (2015) who quoted that the practical difficulties listed as constraints play a major role for investments in research, technology, physical capital and institutional infrastructure. Various suggestions provided by the participants help to increase the training effectiveness and in order to overcome the constraints faced by Scientists (Table 3). About 21.19% of Scientists suggested including practical trainings and hands on experience along with the theoretical knowledge (Table 3). Whereas around 11.55% suggested to conduct follow-up programmes for sustainable trainer-trainee interactions. Similarly an analysis conducted by Cruickshank (2018) has shown that it is very important to plan and build the staff capacities according to their suggestions as they are essential elements of this process, and vital components of planning.

About 3.99% of Technical staff thought that there was certain lack of relevancy of the topics. Whereas 2.11% of them perceived that the organizing Institute lacks the

adequate resources required for the training. However, majority of the trainees did not experience any constraints. Technical staff suggested that the need of practical exposure was the most important rated one. Pathak (2015) also outlined the need of perspective on motivation where he marked practical exposure, need, behaviour, satisfaction and feedback as important points for a training designed for Technical staff in Nepal. The most severe constraint mentioned by Administrative staff (n=456) amongst all was lack of relevancy of the topic in terms of application with 2.19%, followed up by inadequate practical exposure (1.54%). About 17.54% of the Administrative staff perceived the need of practical and hands on exercise along with the theory, 13.82% of them thought that the duration of the courses should be extended to develop a better understanding. Constraints and shortcomings perceived by SSS for trainings were also recorded which is highest (2.86%) for the difference perceived in the nature of work and training content. Majority of the trainees did not perceive any constraint in the trainings organized. Approximately 24.57% SSS suggested that duration of the programmes should be longer and 12.57% of them suggested that number of trainings should be increased. Mohanty *et al.* (2019) quoted that for effective training, it is important that evaluation of training is done during training exercises and subsequently, at the place of its use in the organization. Also for majority of SSS, this was the first ever training exposure and was a much appreciated ICAR effort for capacity development.

In the present study, the perceived training effectiveness index (PTEI) was medium and higher level changes are perceived in majority of trainees. The major constraints observed were insufficient infrastructure facilities at the Institutes and lack of practical in trainings. Inclusion of all categories of staff has been appreciated. Overall, the trainings conducted in the Institutes were found to be effective and led practice and behavioural changes in majority of the staff who underwent the same. ICAR must continue such trainings for enhancing the productivity of staff and the organization.

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*"Learning gives creativity, creativity leads to thinking, thinking provides knowledge, knowledge makes you best"*

*– Dr. APJ Abdul Kalam*

*"Employees cannot become more productive in every sense of the word unless they are provided with continuous on-the-job training"*

*– Gregory Balestrero*

*"There are only two ways in which a manager can impact an employee's output: motivation and training. If you are not training then you are neglecting half the job"*

*– Andrew S. Grove*

*"Leadership and learning are indispensable to each other"*

*– John F. Kennedy*





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