



## ICAR - Directorate of Weed Research, Jabalpur (M.P.)

### TENTATIVE INSTITUTIONS AND DURATION OF TRAINING IN IDENTIFIED AREAS OF SKILL DEFICEINCY OF SCIENTISTS

S.No.	Identified Skill Deficient Areas for Training	Suitable Training Institution/Organization		Approx. Duration of training (days)	Whether your Institution has capacity and competence to impart training in the area (Yes/No)
		National	International*		
1.	Statistical data analysis & related aspects	IASRI, New Delhi	-	21	NO
2.	Leadership & managerial skills	NAARM, Hyderabad	-	30	NO
	MDP on leadership development				NO
	Managerial skills				NO
3.	Molecular breeding techniques	IARI, New Delhi		10	NO
	Molecular diagnostics	IARI, New Delhi		10	NO
	Molecular techniques	IARI, New Delhi		21	NO
4.	Bioinformatics & related specialised field	IASRI, New Delhi		10	NO
5.	Instrumentation techniques				NO
6.	Remote Sensing & GIS	NBSS&LUP, Nagpur		10	NO
7.	Nanotechnology & related aspects				NO
8.	Genomics				NO
9.	IPR Issues	NBPGR		15	NO
10.	Climate Change & related topics	CRRI, Cuttak		10	NO
11.	Molecular biology techniques	NRCPB		90	NO
12.	Next Generation Sequencing related aspects				NO
13.	ICT applications	IASRI, New Delhi		10	NO
14.	Research Management	NAARM, Hyderabad		5	NO
15.	Proteomics				NO
16.	Project management	NAARM, Hyderabad		30	NO
17.	Enhancing water & nutrient use efficiency	TNAU, Coimbatore		7	NO

18.	Hyperspectral thermal imaging for quality and safety evaluation				NO
19.	Precision farming & related aspects	IARI, New Delhi		15	NO
20.	Advances in modelling and climate change				NO
21.	FMS/MIS	IASRI, New Delhi		10	NO
22.	Data base management, digitization	IASRI, New Delhi		10	NO
23.	Administrative & service rules				NO
24.	Impact assessment of agri. technology/Extn. Etc.	NAARM, Hyderabad NCAP, New Delhi		10	NO
25.	Pesticide residue analysis/estimation. (Herbicide residue analysis)	NRCIPM TNAU, Coimbatore		7	YES
26.	Germplasm characterisation, conservation etc.	NBPGR, New Delhi		30	NO
27.	Crop modelling and simulation	ICRISAT, Hyderabad		30	NO
28.	Computer applications				NO
29.	Stress management				NO
30.	Biotechnological tools & approaches	NRCPB TNAU, Coimbatore		7	NO
31.	Gender issues and mainstreaming				NO
32.	Phenomics				NO
33.	C- sequestration				NO
34.	Marker assisted selection				NO
35.	Communication skills				NO
36.	Membrane processing for preparation of protein concentrates				NO
37.	Research methodology				NO
38.	Econometrics				NO
39.	Hyperspectral remote sensing and thermal imaging				NO
40.	Knowledge management				NO
41.	Metagenomics	TNAU, Coimbatore		20	NO
42.	Software applications	IASRI, New Delhi		90	NO
43.	Nutraceutical& functional foods				NO
44.	Bio-control agents	TNAU, Coimbatore		10	NO
45.	Biotic & abiotic stress management				NO
46.	Double haploid production				NO
47.	Metabolomics				NO
48.	Research conceptualisation and development of writing and communication skill	NAARM, Hyderabad		5	NO
49.	Experimental design and statistical data analysis	IASRI, New Delhi		21	NO
50.	PHT				NO

51.	Biodiversity conservation and management				NO
52.	GIS applications	NBSS&LUP, Nagpur		10	NO
53.	Use of HPLC, GC-MS, LCMS etc.				NO
54.	Transgenic				NO
55.	Packaging tools & techniques				NO
56.	Consultancy project management				NO
57.	Entrepreneurship development				NO
58.	High throughput analysis				NO
59.	Seed quality issues				NO
60.	Value chain management				NO
61.	Biofortification and enhancement of nutritional quality				NO
62.	Conservation agriculture. (Weed Management)	ICAR-DWR, Jabalpur		7	YES
63.	Farming system research and modelling				NO
64.	Omics				NO
65.	Simulation modelling				NO
66.	Stem cell technology				NO
67.	SCUBA diving				NO
68.	Decision Support System				NO
69.	DNA barcoding and finger printing	CSIR, New Delhi		30	NO
70.	Genetic resource management	NBPGR, New Delhi		30	NO
71.	Human Resource Management				NO
72.	Isolation, identification and mass multiplication of native bio-control agents				NO
73.	Microscopy techniques	TNAU, Coimbatore		5	NO
74.	Non thermal processing of foods				NO
75.	Protected cultivation				NO
76.	Scientific writing and editing	NAARM, Hyderabad		7	NO
77.	Case study writing				NO
78.	Winning research proposals	NAARM, Hyderabad		15	NO
79.	Nutrigenomics				NO
80.	Breeding techniques				NO
81.	Diagnostic techniques & tools	CIMAP		30	NO
82.	Environmental impact assessment				NO
83.	Functional genomics				NO
84.	Organic farming (Weed Management)	ICAR-DWR, Jabalpur		7	YES
85.	Advances in toxicology				NO
86.	Biosafety issues				NO
87.	Computational biology				NO
88.	Recent advances in determination of soil contaminants				NO

89.	Fermentation technology				NO
90.	Gene cloning				NO
91.	Use of advance instruments in nanotechnology				NO
92.	Cage & pen culture				NO
93.	Chemical ecology related aspects				NO
94.	Cryopreservation of plant material	NBPGR, New Delhi		21	NO
95.	Gene expression regulation and silencing				NO
96.	Imaging systems and techniques				NO
97.	Allele mining	NRCDF		30	NO
98.	Biopesticides (Biological Weed Control)	ICAR-DWR, Jabalpur		7	YES
99.	Design and development of sensor technology				NO
100.	Geoinformatics				NO
101.	Geospatial analysis of NRM	NBSS&LUP, Nagpur		10	NO
102.	PME				NO
103.	Tissue culture techniques	NBPGR, New Delhi		30	NO
104.	Transcriptomics				NO
105.	Hydroponic and aeroponics				NO
106.	Advances in INM				NO
107.	Livestock production and management				NO
108.	Mass spectrometry applications				NO
109.	Membrane processing for preparation of protein concentrates/isolates				NO
110.	Micro array techniques				NO
111.	Fisheries resources, management and aquaculture				NO
112.	Carbon Footprints in Agriculture				NO
113.	Epidemiology and disease surveillance				NO
114.	Faculty development programme on educational technology				NO
115.	Haploid breeding				NO
116.	Electron microscopy	IARI, New Delhi		7	NO
117.	Artificial neural network	IASRI, New Delhi		5	NO
118.	Association mapping	IARI, New Delhi		15	NO
119.	EDP on leadership development				NO
120.	Biosensor applications				NO
121.	Extension methodologies	IARI, New Delhi OR NAARM, Hyderabad		21	NO
122.	GHG emission and estimation				NO
123.	High pressure processing				NO
124.	Hydrological Modelling				NO
125.	Quantitative and population genetics				NO

126.	Supply chain management				NO
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\* Please suggest International Institutions/Organisations, only in case desired level competency of training is not available in a particular area within the country.

\*\* ICAR-DWR, Jabalpur will be associated in imparting training in the identified skill deficient areas related to weed management listed at serial no. 25, 62, 84 and 98 and marked in red .

## **IDENTIFIED AREAS OF SKILL DEFICEINCY OF TECHNICAL STAFF**

<b>S.No.</b>	<b>Identified Skill Deficient Areas for Training</b>	<b>Suitable Training Institution/ Organization</b>	<b>Approx. Duration of training (days)</b>	<b>Whether your Institution has capacity and competence to impart training in the area (Yes/No)</b>
1.	Computer application	IASRI, ISTM, New Delhi / NAARM, Hyderabad	7	No
2.	Statistical analysis & techniques	IASRI, ISTM, New Delhi / NAARM, Hyderabad	7	No
	Data management & analysis	IASRI, ISTM, New Delhi / NAARM, Hyderabad	7	No
	Experimental data analysis & graphics	IASRI, ISTM, New Delhi / NAARM, Hyderabad	7	No
3.	ERP (MIS/FMS)	IASRI, ISTM, New Delhi / NAARM, Hyderabad	7	No
4.	Instrumentation technique			
	Advance instruments in soil & plants analysis- use & maintenance			
	Lab/field equipment's –handling & maintenance			
	HPLC & GC – Use & maintenance			
	Gas & liquid chromatography – use & maintenance			
	AAS- Use & Maintenance			
5.	Designing & layout of field experiment	IARI, New Delhi	10	
	Planning, executing & maintenance of field trials & recording observations	IARI, New Delhi	10	
	Field experimentation	IARI,	10	

		New Delhi		
	Good laboratory practices			
6.	KOHA( library programme)			
7.	Scientific photography & videography	NAARM, Hyderabad	7	
	Digital photography & video production	NAARM, Hyderabad	7	
8.	Leadership & team management	NAARM, Hyderabad	7	
	Motivation & positive thinking			
	Stress management			
	Soft skills and personality development			
9.	Farm management	IARI, New Delhi		
	Laboratory & farm management	IARI, New Delhi		
10.	Farm machinery implement maintenance	CIAE, Bhopal		
	Repair & maintenance of farm machinery & implements	CIAE, Bhopal		
11.	Soil, water and plant analysis	IISS, Bhopal		
	Nutrient analysis in plant & soils	IISS, Bhopal		
12.	Administrative & Service Rules awareness			
13.	Library & Information Management			
14.	Protected cultivation	IARI, New Delhi	7	
15.	Seed production & conservation techniques	IARI, New Delhi	7	
16.	Nursery management			
17.	Communication & scientific writing			
18.	Recording observations with respect to intensity & incidence of major pests diseases of crops			
19.	Sample handling & processing			
20.	Hindi translation			
21.	Competency enhancement programme for technical staff	NAARM, Hyderabad	10	No
22.	Irrigation systems management			
	Irrigation & fertigation under protected cultivation			
	Micro irrigation systems-operation & management			
23.	Molecular biology techniques			
	Laboratory techniques & molecular biology			
24.	Bio-informatics			
25.	Farm mechanization			
26.	GIS & remote sensing	LBSSLUP / NAARM, Hyderabad	21	No
27.	Hybridization techniques in crops			
28.	CAD & drawing			

29.	Good agricultural practices			
30.	Implementation of labour law, procurements of farm store & disposal of farm produce			
31.	Spoken & technical writing skill in English			
32.	Cyber security			
33.	Dairy management- production & processing			
34.	Laboratory animals handling			
35.	Web designing, development & maintenance	IASRI, New Delhi / NAARM, Hyderabad	7	No
36.	Entrepreneurship development			
37.	Microbial culture handling & maintenance			
38.	Equipment maintenance			
39.	Metrology & metrological data management			
40.	Precision agriculture			
41.	Value addition & food processing			
42.	Agricultural knowledge communication			
43.	ICT in Agriculture			
44.	Graphics & multimedia	IASRI, New Delhi / NAARM, Hyderabad	7	No
45.	Identification of insects pest/vectors			
46.	Networking- basics & management	IASRI, New Delhi / NAARM, Hyderabad	7	No
47.	Bio-Chemicals analysis			
48.	Green house management			
49.	Livestock's production & management			
50.	Manufacturing technology & testing of agricultural machinery	CIAE, Bhopal	10	
51.	Mushroom production			
52.	Labour management			
53.	Mass production of bio-agents			
54.	Physiological parameters in relation to climate change			
55.	Automobile maintenance			
56.	Laboratory sophisticated instruments			
57.	Laboratory technique for quality analysis of agri-horticultural crops			
58.	Pest & disease monitoring	NCIPM, New Delhi NICPM, Hyderabad	10	
59.	Seed testing			

60.	Capacity building for technical staff			
61.	Microbiological techniques			
62.	Microscopy			
63.	Editing in Hindi/English technical reports			
64.	Hi-tech propagation & nursery management			
65.	Official language implementation			
66.	Record management			
67.	Bio-safety analysis of GMOs			
68.	Digitization technique			
69.	ELISA testing			
70.	Germplasm collection & conservation	NBPGR, New Delhi		
71.	Noting & drafting			
72.	Pilot plant operation & management			
73.	Welding technologies			
74.	AV-Aids handling			
76.	Auto CAD, PROV, ANCY-S-Automation & Management			
77.	High end equipment's handling			
78.	PME	NAARM, Hyderabad		
79.	Radio isotopes uses			
80.	Tissue culture & molecular biology lab maintenance			
81.	Bio-diversity analysis			
82.	Orchard management			
83.	PHT			
84.	Total quality management			
85.	Workshop engineering operations	PAU, Ludhiana TNAU, Coimbatore		

## **AREAS OF SKILL DEFICIENCY OF ADMINISTRATIVE AND FINANCE STAFF**

<b>S. No.</b>	<b>Identified Skill Deficient Areas for Training</b>	<b>Suitable Training Institution/ Organization</b>	<b>Approx. Duration of training (days)</b>	<b>Whether your Institution has capacity and competence to impart training in the area (Yes/No)</b>
1.	FMS/MIS/ERP	IASRI, New Delhi	7	NO
2.	Computer skills/application	ISTM, New Delhi	5	NO
3.	Office automation	ISTM, New Delhi	5	NO



4.	Enhancing efficiency & behavioural skills	NAARM, Hyderabad	5	NO
	Behavioural skills	NAARM, Hyderabad	5	NO
	Organisational behaviour, motivation, team work and time management	NAARM, Hyderabad	5	NO
	Stress and behavioural management	NAARM, Hyderabad	5	NO
	Team work skills	NAARM, Hyderabad	5	NO
	Personality development and inter-personal relationship	NAARM, Hyderabad	5	NO
5.	Service matter related issues	ISTM, New Delhi	5	NO
6.	Pension and retirement benefits	ISTM, New Delhi	5	NO
7.	e-tendering & e-procurement	ISTM, New Delhi	5	NO
8.	Purchase management	ISTM, New Delhi	5	NO
9.	Establishment rules	ISTM, New Delhi	5	NO
10	Hindi typing & noting	CHTI, Jabalpur	5	NO
11	Managing office & staff management	ISTM, New Delhi	5	NO
	Office management practices/procedures	ISTM, New Delhi	5	NO
12	Pay fixation and allowances	ISTM, New Delhi	5	NO
13	Financial matters, establishment and maintenance of records	ISTM, New Delhi	5	NO
14	Store management	ISTM, New Delhi	5	NO
15	FR & SR	ISTM, New Delhi	5	NO
16	Noting & Drafting	ISTM, New Delhi	5	NO
17	R.T.I. Act related issues	ISTM, New Delhi	5	NO
18	Court cases & legal issues	ISTM, New Delhi	5	NO
19	Income Tax related Issues	ISTM, New Delhi	5	NO
20	Record management	ISTM, New Delhi	5	NO
	File and record management	National Archive, Bhopal	5	NO
21	Accounting & financial management	ISTM, New Delhi	5	NO
22	Condemnation of articles	ISTM, New Delhi	5	NO
23	Reservation related issues	ISTM,	5	NO

		New Delhi		
24	CCS (CCA) Conduct Rules	ISTM, New Delhi	5	NO
25	Works related matters	ISTM, New Delhi	5	NO
26	Audit and Accounts (Audit Manual)	ISTM, New Delhi	5	NO
27	Contract management	ISTM, New Delhi	5	NO
	Out sourcing of security sources	ISTM, New Delhi	5	NO
28	GFR	ISTM, New Delhi	5	NO
29	Administrative vigilance	ISTM, New Delhi	5	NO
30	Cash management	ISTM, New Delhi	5	NO
31	Recruitment procedures & rules	ISTM, New Delhi	5	NO
32	Contingency/Fellowship/Bank Reconciliation, Pay Bills & Medicals	ISTM, New Delhi	5	NO
33	e-governance	ISTM, New Delhi	5	NO
34	GPF, GSLIS, accounts, bank reconciliation and cash book maintenance	ISTM, New Delhi	5	NO
35	General administration & accounting	ISTM, New Delhi	5	NO
36	IPR issues	ISTM, New Delhi	5	NO
37	VAT, Service Tax, ESI, EPF etc. applicable on government institutions	ISTM, New Delhi	5	NO
38	Maintenance of stock register, assets register and office records	ISTM, New Delhi	5	NO
39	Administration & financial management	ISTM, New Delhi	5	NO
40	Communication skills	NAARM, Hyderabad	5	NO
41	Budget related aspects	ISTM, New Delhi	5	NO
42	Cyber security, Networking, Net Programming	ISTM, New Delhi	5	NO
43	Labour contract and labour laws	ISTM, New Delhi	5	NO
44	Loan and advances	ISTM, New Delhi	5	NO
45	Diary and despatch	ISTM, New Delhi	5	NO
46	Promotion procedures/rules	ISTM, New Delhi	5	NO