

**Information on  
Foundation Course for Agricultural Research Service (FOCARS)  
(7 months duration)**

The FOCARS is the most critical component of the capacity building framework being implemented by NAARM for ICAR. It is designed for the **newly recruited entry-level scientists to the Agricultural Research Service of the ICAR**. The course aims at providing exposure to the trainees on the concepts and principles of project management with special emphasis on project formulation and implementation. It also includes capsules in related areas on human resources development, and information and communication management. Till date, the Academy organized **102** batches of this course and trained **5974** scientist probationers.

The major thrust of the training is on enabling a transition from a research student to a research professional performing and contributing to the achievement of the organizational mission of ICAR. Currently, the course is organized for period of 7 months and organized in 3 parts/stages at 3 different locations.

<b>Part/Stage</b>	<b>Duration</b>	<b>Location/ Implementing Agency</b>
<b>A. Foundation Training</b>	3months	ICAR-NAARM
<b>B.Orientation Training at ICAR Institute</b>	1 month	ICAR institute of posting of respective scientist-trainee/Director of the concerned ICAR institute
<b>C.Professional Attachment Training</b>	3 months	Mentoring with professional at any university and institute in scientist- trainee's discipline / Director of the concerned ICAR institute

**A. Foundation Training of 3 months at NAARM**

**i.Purpose**

- To apprise the scientist trainees about the challenges in agricultural sector, and acquaint them about socioeconomic milieu of rural society, agricultural research, education and development systems in the country.
- To sensitize the scientist trainees about the global agricultural scenario and its implications to Indian agriculture viz. trade, climate change, protection of agrobiodiversity and intellectual property rights.
- To stimulate critical thinking, team work and interdisciplinary approach to increase their active participation in agricultural research.
- To expose the scientist trainees to the modern concepts of agricultural research project management, data and information management, and research methodologies for promoting professional and innovation competence.

- To provide knowledge and skills for enhancing personality & inter-personal relationships, written & oral communication, presentation skills, motivation & organizational behaviour.

## **ii. Duration: 3 months**

**Focus:** The focus of training at part/stage A of FOCARS is primarily on sensitization of the scientist-trainees to the context and concerns of national and global agricultural research and orient them to vision and mission of ICAR, strategy and processes for research systems in the NARS. Using a modular approach, the training focusses on enhancing skills and competencies in four areas, namely: (i) Research Management which include research prioritization, methodology, tools for search; developing project proposals; project management including impact assessment and scientific writing and presentation using electronic and other media; (ii) Personal effectiveness emphasizing on soft skill development for critical thinking, problem solving processes, personality development and behaviour ; interpersonal skills and team management; (iii) Management of information through skills development in IT tools of documentation, communication, multimedia, data analysis, networking and work flow along with GIS and database management; (iv) Agriculture Scenario which cover policies and perspectives (v) Orientation to Organization which emphasizes ICAR's vision, mission and strategy; (vi) Technology development and Transfer which focusses on stakeholder engagement in participatory mode, agri-innovations, IP and biodiversity management

Annexure I summarizes the technical sessions under each of these areas.

- iii. Process:** The 3 month training at NAARM is conducted in three phases which include : (i) a 6 week Orientation and Capacity Building during the Phase I ; (ii) Field Experience Training (at Regional stations of AU, ICAR institutes, KVK & NGOs for 3 weeks and (iii) Phase III on building Multidisciplinary Perspectives for 3 weeks at NAARM . The phases I and III are organized at NAARM using the modular approach. The Phase II, or Field Experience Training (FET), is conducted by the Academy at identified regional stations of AUs, ICAR institutes, KVK and NGOs.

The FOCARS programme also includes educational visits to various research institutes in and around the Hyderabad to familiarize the trainees with the research activities of different national and international organizations.

- iv. Evaluation:** The three months phase at NAARM is evaluated using a 360° degree approach including a customized on-line examination for the academic learning and series of progressive evaluations of the various sessions in the formal and informal platforms including peer evaluations of team working. Annexure I details the criteria and weightage for the activities spanning across the three- month training during Stage A of FOCARS at NAARM.

## **B. Orientation Programme at Institutes (place of posting) with 1 month duration**

### **i. Purpose**

To orient new Scientists to the Institute's role, vision, mission, values, culture, philosophy, policies and procedures, and to how it engages with its stakeholders.

### **ii. Duration:** One month

### **iii. Process:**

- a. Director/Head of Division assigns a senior scientist/faculty as in charge/mentor for the orientation/induction program. He/She will help in completing joining formalities, ensure that the new Scientist feels comfortable in the institute, and makes necessary arrangements to conduct the induction program like scheduling activities and meetings, ensuring access to email and other institutional resources, etc. Logistics support in the form of Guest House/on-campus accommodation may also be provided during the orientation training period where applicable.
- b. Director/Head of Division will give the new scientists an overview of the organization, its history, structure, present role, vision, mission, activities, and facilities and facilitate engagement with stakeholders (farmers, industry, NGOs).
- c. The programme will include orientation of the new Scientist to the various activities of Divisions/Sections, cells, regional centres, etc., and the reporting systems in the Institute and introduce the Scientist to the various facets of the institute and its working.
- d. The new Scientist will be exposed to the institute-farmer or other client interface by facilitating visits to adopted villages and to the offices of few key stakeholders (eg industry, NGOs, institutional research partners).
- e. The programme will include orientation of the Scientist to the administrative and financial processes and procedures followed in the institute. Any special processes being followed and unique to the institute may be highlighted.
- f. The new scientist will :
  - familiarize himself with the institution's structure, organization and activities by reading the core documents like the Vision 2030, Annual Reports of the past 3 years, IRC and RAC proceedings, QRT reports, recent publications from the institute, etc..
  - Understand the activities of Divisions/Sections/Regional Stations by visiting the laboratories/fields, interacting with the scientists and technicians, and reading the research publications
  - Understand the processes and activities of the Institute's PME Cell, ITMU and technology transfer units
  - Understand the reporting processes and systems followed (APAR, CAS, etc.)
  - Get to know the administrative and financial staff and the basic procedures followed in the institute for procurement and other administrative functions
  - Prepare for the professional attachment training for 3 months (which will follow the Orientation Training), in consultation with the mentor and senior professionals of the institute). This will include familiarization with the research of the lab/group he/she will be with and the likely problem he/she will work on in the attached Lab/Institute/organization.

The scientist in-charge will assist and guide the scientist-trainee in preparing a research proposal as per the institutes requirements, and also a brief report of his/her training details, experiences, new learning, and scope for further capacity development so as to enable him to serve the institute better. The mentor will also arrange for a presentation of the Scientist's report before he/she is relieved to proceed for the next phase of Attachment Training. The guidelines and evaluation proforma is placed at Annexure II.

### **C. Professional Attachment Training with 3 months duration**

**i. Purpose:** The scientists are posted for professional attachment training and work with a mentor at a selected Lab/group/organization in India. Selection of the organization/institute/lab/group for attachment training and the area of training is based on the Institute's mandate, scientists discipline, current active projects and planned future thrusts of the Institute/Division/Section to which he/she is posted and the expertise of the mentor.

**ii. Duration:** 3 months

**iii. Process:** Short term attachment training with leading Labs/Scientists for 3 months is done by the institute in consultation with senior professionals in discipline to ensure relevance to institutional mandate. Here the focus is on: internalizing the drive for research excellence and the culture of leading research labs through exposure and disciplined practice over an extended period; training to be a well-trained research professional in the area ready to take up institutional research activity as member of research project teams; and forge links between the two institutions for future

**iv. Evaluation:** At the end of the three month period, the mentor evaluates the performance of the scientist-trainee and has to send to Director, NAARM through institute Director. Guidelines and the proforma of evaluation is attached placed at Annexure III.

### **Final Evaluation of the 7 months Training of FOCARS**

All the stages of the training involve a rigorous evaluation and grading processes by respective Coordinators/ Directors/ Supervisors/Mentors at the three institutions. A final evaluation and grade is given by NAARM based on the three evaluations. The final grade is a weighted average of grades of Foundation Training at NAARM (40%), Institutional Training (20%) and Attachment Training (40%).

It must be recognized that in highly intellectual, complex and specialized professions like agricultural research, much of the learning happens in context. This is why the FOCARS emphasizes both formal training in organizational processes (at NAARM) and contextual learning (at Institute and Attachment Training). Overall, the FOCARS provides opportunities to acquire core generic research and institutional process oriented skills, sensitizes young new entrants to ARS to relevant behavioural attributes to be effective professionals and team players, and motivates self-learning and self-development in the cause of the organizational mission. It facilitates a seamless transition of the young scientists into the organization role to become more efficient and effective professionals and provides the foundation for future research leadership of ICAR/NARS.

**I. Table summarizing the focused areas of competency development during Stage A of FOCARS**

Competency Area		No. of Topics	No. of Sessions
1.	Research Management	16	62
2.	Personal Effectiveness	13	28
3.	Use of IT Tools	14	21 19
4.	Agriculture Scenario	8	25
5.	Orientation to Organization	7	11
6.	Technology development and Transfer	23	48
	General		30
<b>Total Sessions</b>			<b>244</b>

**II. Outline of Evaluation Criteria used during Stage A of FOCARS**

	Evaluation Items	Marks	Criteria
<b>1.</b>	<b>On-line written examination</b>	<b>100</b>	100 multiple choice questions through customized online examination
<b>2.</b>	<b>FET</b>	<b>100</b>	
2a	Evaluation at FET centre	25	Behaviour & discipline, performance in seminars & contribution to team performance
2b	FET Report	50	Content (15), Organization (20), Readability (10), illustrations (5)
2c	FET presentation at NAARM	25	Subject, Presentation style, AV aids, Discussion & group impact
	<b>Practical</b>	<b>70</b>	
3a	Organizational Behaviour	30	Attendance & Assignment
3b	Scientific	20	Principles followed, effective writing
3c	Bibliographic and patent search	20	Exercise
<b>4.</b>	<b>Presentations</b>	<b>90</b>	
4a	RPF presentation	30	Problem Identification (8), Project formulation (8), Flow chart and PERT (6), Presentation style & discussion (8)
4b	Video production	10	Subject (2), Organization (2), Structure & style (4) & Discussion (2)
4c	Oral communication	20	Content (2), Treatment (2), Delivery (4) & Impact (2)
4d	Digital presentation	10	Content (2), Treatment (2), Style (4) & Impact (2)
4c	Term paper	20	Subject (5) & Style (5)
<b>5.</b>	<b>Evaluation by Course Directors</b>	<b>40</b>	Attendance (10), Yoga and Discipline (10), Behaviour including peer review (10), Overall performance (10)
<b>Total</b>		<b>400</b>	

**Guidelines for evaluation of FOCARS trainees during Orientation Programme at Institutes**

**1. Purpose**

To orient new Scientists to the Institute's role, vision, mission, values, culture, philosophy, policies and procedures, and to how it engages with its stakeholders.

**2. Duration:** One month

**3. Process:**

- (i) Director/Head of Division assigns a senior scientist/faculty as in charge/mentor for the orientation/induction program. He/She will help in completing joining formalities, ensure that the new Scientist feels comfortable in the institute, and makes necessary arrangements to conduct the induction program like scheduling activities and meetings, ensuring access to email and other institutional resources, etc. Logistics support in the form of Guest House/on-campus accommodation may also be provided during the orientation training period where applicable.
- (ii) Director/Head of Division will give the new scientists an overview of the organization, its history, structure, present role, vision, mission, activities, facilities and facilitate engagement with stakeholders (farmers, industry, NGOs).
- (iii) The programme will include orientation of the new Scientist to the various activities of Divisions/Sections, cells, regional centres, etc., and the reporting systems in the Institute and introduce the Scientist to the various facets of the institute and its working.
- (iv) The new Scientist will be exposed to the institute-farmer or other client interface by facilitating visits to adopted villages and to the offices of few key stakeholders (eg industry, NGOs, institutional research partners).
- (v) The programme will include orientation of the Scientist to the administrative and financial processes and procedures followed in the institute. Any special processes being followed and unique to the institute may be high lighted.
- (vi) The new scientist will :
  - (a) familiarize himself with the institution's structure, organization and activities by reading the core documents like the Vision 2030, Annual Reports of the past 3 years, IRC and RAC proceedings, QRT reports, recent publications from the institute, etc..
  - (b) Understand the activities of Divisions/Sections/Regional Stations by visiting the laboratories/fields, interacting with the scientists and technicians, and reading the research publications
  - (c) Understand the processes and activities of the Institute's PME cell, ITMU and technology transfer units
  - (d) Understand the reporting processes and systems followed (APAR, CAS, etc.)
  - (e) Get to know the administrative and financial staff and the basic procedures followed in the institute for procurement and other administrative functions

- (f) Prepare for the professional attachment training for 3 months (which will follow the Orientation Training), in consultation with the mentor and senior professionals of the institute). This will include familiarization with the research of the lab/group he/she will be with and the likely problem he/she will work on in the attached Lab/Institute/organization.
- (vii) The scientist in charge will assist and guide the scientist-trainee in preparing a research proposal as per the institutes requirements, and also a brief report of his/her training details, experiences, new learning, and scope for further capacity development so as to enable him to serve the institute better. The mentor will also arrange for a presentation of the Scientist's report before he/she is relieved to proceed for the next phase of Professional Attachment Training.

**v. Reporting (by Scientist at Institute):**

The Scientist-trainee will maintain a daily record of activities and prepare weekly reports of all of his activities during the week and his learnings from interactions and readings. The reports will be forwarded by his Mentor/Division Head to the Director for evaluation

At the end of four weeks, the scientist trainee will prepare a brief report of his/her training giving details of activities, experiences, new learning and scope for furthering his/her capacity development so as to serve the institute better.

Before leaving for next phase of Attachment Training, the scientist-trainee will present his/her training report including research proposal to the institute faculty.

**vi. Report on orientation training to be sent to NAARM by the Director for inclusion in final evaluation:**

A final report on the Scientist-Trainees performance is to be sent to NAARM for inclusion in the final evaluation in the format given in the Annexure. This is required for the consolidated report on training to be by NAARM after completion of orientation and attachment training.

**Proforma for Evaluation Report on Orientation Training  
(to be sent to Director NAARM)**

**Name of Scientist:**

**Institute:**

**FOCARS Batch No.:**

**Date of birth:**

**Discipline:**

**Period and Dates of Orientation Training:**

*(i) Professional attributes (weight 40% )- (please score on a Scale of 1-10)*

<i>Excellent (9 or above)</i>	<i>Very Good (7-9)</i>	<i>Good (6-7)</i>	<i>fair (5-6)</i>
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<i>No.</i>	<i>Criteria</i>	<i>Score</i>
1.	Punctuality and discipline	
2.	Shows initiative	
3.	Communication - speaking	
4.	Communication - writing	
5.	Interdisciplinary understanding	
6.	Motivation for learning	
7.	Acceptance by Peer Group	
8.	Attitude towards farmer/client issues/problems	
9.	Understanding of Rules/ regulations	
10.	Attitude towards field and subordinate staff	
11.	Professional attitude	
12.	Identification with institute	
	<b>Average Score (X)</b>	

*(ii) Weekly Reports (weight: 60%)*

<i>No.</i>	<i>Criteria</i>	<i>Score</i>
1.	Weekly report 1	
2.	Weekly report 2	
3.	Weekly report 3	
4.	Final report and presentation	
	<b>Average Score (Y)</b>	

Overall Score:  $(0.4 * X + 0.6 * Y) = Z$ ;

Overall Grade: A / B / C (A for  $Z \geq 8$ ; B for  $Z = 6 - 8$ ; C for  $Z < 6$ )

Signature of Scientist-In-Charge of Orientation Training  
Director

Signature and Seal of



**Evaluation Format for 3-month Professional Attachment Training of Newly Recruited  
ARS Scientist  
(to be sent to Director NAARM)**

**Professional Attachment Training:** The scientists posted for professional attachment training will take a short problem (3 months) and work with a mentor at a selected Lab/group/organization in India. Selection of the organization/ institute/lab/group for professional attachment training and the area of training will be based on the Institute's mandate, scientist's discipline, current active projects and planned future thrusts of the Institute/Division/Section to which he/she is posted and the expertise of the mentor.

**Name of Scientist:**

**Institute:**

**FOCARS Batch No.:**

**Date of birth:**

**Discipline:**

**Details of Attachment training (3 months):**

**Location (Institute/Laboratory):**

**Scientist/Faculty in-charge:**

**Dates of Attachment Training:**

*(i) Professional attributes (weight 50%)*

<i>Excellent (9 &amp; above )</i>	<i>Very Good(8- 8.9)</i>	<i>Good (7- 7.9)</i>	<i>Fair (6- 6.9)</i>
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<i>No.</i>	<i>Criteria</i>	<i>Score on a Scale of 1-10</i>
13.	Punctuality	
14.	Discipline	
15.	Initiative	
16.	Dependability	
17.	Communication - speaking	
18.	Communication - writing	
19.	Depth of knowledge in subject	
20.	Lab / Field Discipline	
21.	Experimental / survey / interview skills	
22.	Maintenance of records and data	
23.	Analytical skills	
24.	Ability to interpret data/information	
25.	Documentation skills	
26.	Ethical behaviour	
27.	Creativity in problem identification	
28.	Inquisitiveness to learn and for inquiry	
29.	Willingness to work with others	
30.	Willingness to work late hours	
31.	Professional attitude	
32.	Accepts criticism	
	<b>Average Score (X)</b>	

**(ii) Training Report to be submitted and presented by the trainee-scientist (weight: 50%)**

<i>Excellent (9 &amp; above )</i>	<i>Very Good (8- 8.9)</i>	<i>Good (7- 7.9)</i>	<i>Fair (6- 6.9)</i>
<b>No.</b>	<b>Criteria</b>	<b>Score on a Scale of 1 to 10</b>	
5.	Scientific quality		
6.	Quality of writing (readability, illustrations, etc.)		
7.	Utility		
8.	Presentation and discussion		
	<b>Average Score (Y)</b>		

Overall Score:  $(0.5 * X + 0.5 * Y) = Z$ ;

Overall Grade: A / B / C (A for  $Z \geq 8$ ; B for  $Z = 6 - 8$ ; C for  $Z < 6$ )

Research Report (to be submitted)

Remarks of Professor/Scientist in-charge:

Remarks of Director:

Signature and seal of Professor  
Scientist-In-Charge of Attachment Training

Signature and Seal of Director

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