

## **ITEC Training Programme on “Application of ICTs in Agriculture”**

### **Rationale and justification for the ITEC Programme at MANAGE, Hyderabad**

India has shown tremendous growth in agriculture sector since its independence, its success is worth emulating to witness the same kind of development in other countries with similar socio-economic and geographical features. The agricultural extension in India has risen to the challenges over several years by addressing the issues in terms of capacity development and service delivery through the effective use of Information and Communication Technology (ICT) applications.

MANAGE, as an autonomous institution under the ministry of agriculture and farmers welfare has lead the ways in formulating the extension strategies and capacity development in India. These strengths of Indian agriculture extension system facilitated by MANAGE, research organizations and State Agriculture Universities calls for spreading the experiences for the benefit of policy makers, administrators, researchers and field level officials from other countries.

Besides sharing the India’s experiences and competence through the ITEC Programmes, on application of Information and Communication Technologies (ICTs) in Agriculture, we stand to gain from the mutual cooperation with other countries in terms of cross learning and their good will.

### **Aims and Learning Objectives**

- To know the role and importance of the ICT application in agriculture.
- To understand the tools and modules of ICT applications in agricultural scenario for sustainable agriculture development.
- To orient the participants to latest ICT innovations used in agriculture in India other countries.
- To develop an action plan for operationalization of the concepts learnt during the training program.

## Tentative Programme Schedule

| <b>Day - 1</b>   |  |
|------------------|--|
| 9.30 – 10:30am   | Registration   |
| 10.30 am – 11:15 | Inauguration   |
| 11.15 am         | Tea Break  |
| 11.30 am         | Icebreaking – Interactive Session  |
|                  | Pre-Training Test  |
|                  | Experience Sharing : ICT in Agriculture – Gap Analysis on ICT infrastructure, Usage and Capacities   |
| 01.00 pm         | Lunch  |
| 02.00 pm         | Orientation on Programme Overview and Programme Designing  |
| 03.30 pm         | Tea Break  |
| 03.45 pm         | Over view of Digital Agriculture   |
| 05:15 pm         | Close  |
| <b>Day- 2</b>    |  |
| 09:30 – 11:15 am | Digital India initiative – National e-Governance Plan in Agriculture (NeGP-A)  |
| 11.15 am         | Tea Break  |
| 11.30 am         | Farmers' Portal: Demonstration and discussions on Implementation Plan – Issues related to content management, Institutional Collaboration / Linkages and Capacities. |
| 01.00 pm         | Lunch  |
| 02.00 pm         | VISTAAR Project – A Government of India initiative   |
| 03.30 pm         | Tea Break  |
| 03.45 pm         | Introduction to CABI and its digital tools interventions   |
| 05:15 pm         | Close  |
| <b>Day -3</b>    |  |
| 09:30 – 11:15 am | Indian Initiatives - National Soil Health Card, National Crop  |

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|                  | Insurance and Crop Cutting Experiments [Discussion]   |
| 11.15 am         | Tea Break   |
| 11.30 am         | Indian Initiatives – Work flow systems: Farm Mechanization, Seed distribution, Fertilizer distribution etc. and [Discussion]                            |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Farmers Call Center (FCC) : Concept and Services  |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | Farmers Call Center: Implementation Strategies - Discussions<br>Visit to Farmers Call Center  |
| 05:15 pm         | Close   |
|                  | <b>Day - 4</b>  |
| 09:30 – 11:15 am | Overview of Artificial Intelligence (AI) and its applications in Agriculture  |
| 11.15 am         | Tea Break   |
| 11.30 am         | Importance of Big Data and its application in Agriculture   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Artificial Intelligence (AI) based smart Agriculture for sustainable development  |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | AI based application: PLANTIX   |
| 05:15 pm         | Close   |
|                  | <b>Day - 5</b>  |
| 09:30 – 11:15 am | Mobile based eExtension services: Concept of SMS Alerts service to farmers, SMS Gateway, SMS Application Model and Cases (IFFCO Voice message services) |
| 11.15 am         | Tea Break   |
| 11.30 am         | Digital Advisory Services: NICE application   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Mobile apps in Agriculture  |

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| 03.30 pm         | Tea Break   |
| 03.45 pm         | Mobile based e-Extension services: Implementation strategies of m-Kisan portal and services - Discussions                           |
| 05:15 pm         | Close   |
|                  | <b>Day - 6</b>  |
| 09:30 – 11:15 am | Linking Farmer to Markets: Demonstration of Indian Market Information System - Agricultural Marketing Network AGMARKNET and – e-NAM |
| 11.15 am         | Tea Break   |
| 11.30 am         | Linking Farmer to Markets: Case on e-Choupal – an initiative of ITC e-Choupal   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Visit to APMC Market  |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | Visit to APMC Market  |
| 05:15 pm         | Close   |
|                  | <b>Day - 7</b>  |
|                  | Study Tour  |
|                  | <b>Day - 8</b>  |
| 09:30 – 11:15 am | A case Rice Knowledge Management Portal – An initiative of IRR.   |
| 11.15 am         | Tea Break   |
| 11.30 am         | Use of Social Media in Agriculture: Demonstration of SM tools and Case presentation   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Peoples Media for Sharing Agricultural Knowledge: Community Radios  |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | Role of Expert Systems in Agriculture: Concept and Case presentation  |

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| 05:15 pm         | Close   |
|                  | <b>Day - 9</b>  |
| 09:30 – 11:15 am | Introduction to Internet of Things (IoT)  |
| 11.15 am         | Tea Break   |
| 11.30 am         | IoT Examples and Case studies   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Block chain technologies in Agriculture   |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | Use of Geo-Informatics and Sensor based technologies in precision farming                     |
| 05:15 pm         | Close   |
|                  | <b>Day-10</b>   |
| 09:30 – 11:15 am | Applications of Drones in Modern Agriculture practices and SOPs for use of Drone Applications |
| 11.15 am         | Tea Break   |
| 11.30 am         | Drone Applications: Technology, types of drones, components and drones for Agriculture        |
| 01.00 pm         | Lunch   |
| 02.00 pm         | Print Media- Salient features and effective designing tools and techniques                    |
| 03.30 pm         | Tea Break   |
| 03.45 pm         | Basics of preparation of video documentaries, editing etc.                                    |
| 05:15 pm         | Close   |
|                  | <b>Day-11</b>   |
| 09:30 – 11:15 am | ICT Initiatives of ICRISAT – Visit to ICRISAT   |
| 11.15 am         | Tea Break   |
| 11.30 am         | ICT Initiatives of ICRISAT – Visit to ICRISAT   |
| 01.00 pm         | Lunch   |
| 02.00 pm         | ICT Initiatives of ICRISAT – Visit to ICRISAT   |

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| 03.30 pm         | Tea Break  |
| 05:15 pm         | ICT Initiatives of ICRISAT – Visit to ICRISAT                        |
|                  | <b>Day-12</b>  |
| 09:30 – 11:15 am | Application of Remote Sensing and GIS in Agriculture                 |
| 11.15 am         | Tea Break  |
| 11.30 am         | Designing of Database Management for Programme Implementation        |
| 01.00 pm         | Lunch  |
| 02.00 pm         | ICT based agro-advisory services – A case on e-Sagu, IIIT, Hyderabad |
| 03.30 pm         | Tea Break  |
| 03.45 pm         | ICT based Weather based agro-advisory services.                      |
| 05:15 pm         | Close  |
|                  | <b>Day-13</b>  |
|                  | Study Tour   |
|                  | <b>Day-14</b>  |
| 09:30 – 11:15 am | BACK AT WORK PLAN  |
| 11.15 am         | Tea Break  |
| 11.30 am         | BACK AT WORK PLAN  |
| 01.00 pm         | Lunch  |
| 02.00 pm         | Post-Training Test<br>Review and Feedback of the Training Programme  |
| 03.30 pm         | Tea Break  |
| 03.45 pm         | Valedictory  |
| 5:30 pm          | Close  |

### **Expected learning outcomes from the course**

- Enhanced knowledge and understanding of participants about India's experience in use of ICT application in agriculture.
- Improved practical knowledge of participants on innovative and emerging trends of ICT applications in agriculture.
- Help in making effective extension strategies for using the ICT initiatives in sustainable agriculture development.

### **Eligibility Conditions of the participants**

1. Reasonable level of experience in Public/ Private/ Civil Societies in Agriculture and allied sectors in the training theme area.
2. Applicant shall possess physical and mental skills and abilities for successfully completing the program.
3. Working knowledge of English is mandatory to understand the training content on sustainable agriculture development.

### **Additional details for uploading on ITEC portal:**

|  |   |
|--|---|
| Educational qualifications of candidates                               | Graduates and Post graduates in agricultural science or computer applications   |
| Work experience (required) if any                                      | Working experience in the field of agriculture and rural development for minimum 5 years is desired   |
| Minimum age  | 30 years  |
| Maximum age  | 50 years  |
| Target Group (level of participants, target ministries or dept., etc.) | Middle level Officers from Department of Agriculture, Non-Governmental Organizations, Farmer producer Company or Universities working in Agriculture sciences |
| Number of days of local trips  | 5 (Tentative)   |
| Number of days for outstation trips                                    | 0   |

|   |                          |
|---|--------------------------|
| Number of nights for outstation trips                   | 0                        |
| Places to be visited                                    | Hyderabad, Golkonda, RFC |
| Mode of transport                                       | AC Bus/ AC Train         |
| Transportation charges (approx.)                        | INR 50,000/- per batch   |
| Accommodation charges, if hotel is required to be hired | NA                       |
| Entry ticket charges                                    | INR 4500 per candidate   |

### **Course Director Details**

#### **Dr. K. Krishna Reddy**

Director (ICT)

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