

# U.P. HIGHER EDUCATION SERVICES COMMISSION, ALLAHABAD

## **AGRICULTURAL EXTENSION**

(Subject Code-89)

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### **Unit 1: Fundamentals of Extension and Communication**

Concepts and scope of extension and communication particularly for primary and secondary agriculture. Historical and emerging perspectives of agricultural, veterinary and animal husbandry extension education in India and other countries. Community Development and Integrated Rural Development- concept, principles and objectives. Role of agricultural extension in different sectors of agriculture and rural development. Agricultural Extension in the context of enhancing productivity, Quality, Nutrition, post harvest technology, product processing, Profitability, Income and Employment. Concepts of yield gaps. FLD and OFT in relation to TOT programmes. Farming System Research and Extension (FSR&E) and participatory development approaches. Concept and modules of communication, credibility, fidelity, empathy and feedback in communication. Similarities and dissimilarities among extension education, adult education and continuing/distance education. Andragogy and theories of adult learning. Human behavioural dimensions and gender sensitivity in extension education programmes. Meaning and characteristics of attitude, factors affecting attitude change; Understanding of basic rural institutions, social structure, culture and norms. Social and technological change processes, group dynamics, concepts and theories of rural leadership. Group and mass communication, Interpersonal and Intrapersonal Communication Skills, Key communicators and their role in animal husbandry development, Organizational communication. Rapport building with clientele. Problems and barriers in communication; distortion and noise in communication. Importance of feedback in Agriculture/veterinary extension, impact analysis of extension programmes.

### **Unit 2: Extension Methods & Farm Journalism**

Concepts of teaching and learning processes—principles of learning as applied to agricultural extension. Individual, group and mass approaches in extension, audiovisual aids-classification, selection, use and production. Traditional media for communication in development programmes. Modularized communication- concept, approach, need, process of designing instruction for transfer of communication. Basics of agricultural journalism, types of publications – bulletins, folders, leaflets, booklets, newsletters, popular and scientific articles. Selection, planning and use of different extension teaching methods like demonstration, exhibition, farmers fairs, field days, tours, extension literature, etc. Preparation and presentation of different projected and non-projected audio-visual aids. Public speaking. Preparation of radio/video script. Principles of photography and its use in extension.

### **Unit 3: Information Communication Technologies (ICT)**

Concept of ICT and its role in agriculture and rural development. ICT tools- print and electronic media, e-mail, Internet, use of multimedia, use of mobile phone, video and teleconferencing, computer-assisted instructions, touch screens, micro-computers, web technologies and information kiosks. Networking system of information and challenges in the use of ICT. E-learning, information resources, sharing and networking. Types of network – PAN, LAN, WAN, Internet, AGRINET, KIS, Indian National Agricultural Research database. ICT programmes in livestock development, Problems and prospects of ICTs in livestock development, Digitisation, Simulation models, Utilization of Internet for promoting advanced veterinary and animal husbandry practices; communication with rural, semi-urban and urban livestock owners.

### **Unit 4: Training & Human Resource Development**

Human resources and their importance in agricultural development. Concept of human resource management. Training and development of human resources. Identifying training needs and assessment of training impact. Training – principles, importance, methods and factors. Phases of training - pre training and post training. Developing training modules,

training requirements, training methods. Lecture cum demonstration method, case method, group brain storming, syndicate method, business games, simulation exercises, in basket exercise, programmed instruction, experiential learning techniques such as sensitivity training, T-group, transactional analysis and fish bowl exercise. Evaluation of training - types and techniques of training evaluation. Motivation, stress management and organizational behaviour as facilitators of human resource development. Capacity Building in relation to Dairying, Poultry, Piggery, Goat and Sheep farming, cottage industries, Rabbit farming, Apiculture, Sericulture, Biofertilizer, Floriculture, and Biopesticides.

#### **Unit 5: Research Methodology in Extension Education**

Social research- concept, principles and approach. Selection and identification of research problems, methods of data collection- interview method and mailed questionnaires, variables -meaning and types, independent, dependent and intervening variables. Hypothesis-concept, characteristics, types and testing. Research design-concept and types, field studies, case studies and survey method. Measurement-meaning and levels. Methods of sampling and statistical tests. Reliability and validity of tests, normal distribution, tests of significance, ANOVA, correlation and regression, scaling techniques. Processing of data, coding-tabulation. Analysis and interpretation. Writing scientific reports, citing references. Participatory approaches, PRA, RRA, PLA and PTD.

#### **Unit 6: Programme Planning, Evaluation & Diffusion and Adoption of Innovations**

Concept, steps, principles and theories of programme planning. Steps in programme planning for livestock development, organizing campaigns, mass vaccination programmes and variety of extension activities, evaluation of veterinary extension programmes, compilation and report writing. Evaluation of animal husbandry development programmes and schemes. Monitoring and evaluation – concept, significance, types, methods and tools. Theoretical models of programme planning. Felt needs; need-based programmes. Social action. Five Year Plans-critical analysis with special reference to programmes for women, children and youth. SWOT/TOWS analysis of development programmes. Concept and elements of diffusion and adoption for social change. Diffusion process, adoption process, models of diffusion and adoption, adopter categories and their characteristics. Factors influencing adoption and attributes of innovations. Concept and stages of Innovation-decision process, consequences of innovations.

#### **Unit 7: Extension Management**

Concept and principles of administration and management, classical and modern theories, schools of management thought. Functions of management – planning, organizing, staffing, directing and leading, controlling, coordinating, reporting and budgeting. Types and methods of administrative communication. Decision-making in organization. Organizational effectiveness, organizational climate, organizational behaviour, organizational development, job satisfaction and morale. Time management. Performance appraisal. Coordination at different levels of extension management, methods of coordination. Management by Objective (MBO) and Total Quality Management (TQM). Project Evaluation and Review Technique (PERT). Logical Frame Working (LFW) and Project Management Techniques. Personal management, scope of AgriBusiness Management and Institutions - National Institute of Agricultural Extension and Management (MANAGE). Indian Institute of Plantation Management (IIPM), NIRD, Eel and NAARM. Monitoring, evaluation and impact analysis of extension programmes. Critical analysis of organizational set up of extension administration at various levels. Agricultural Technology Information Centers (ATIC). Technology Parks. Management Information System. Management of Agricultural Knowledge System (MAKS) and use of Expert System. Traditional media for communication in development programmes. Problem Solving Techniques/Negotiation , Motivational Theories & Techniques, Work motivation Organizationalclimate; Resource management: concept and methods; Team building: process and strategies at organizational and village levels. Mobilization and empowerment skills: concept and strategies in mobilization, concretisation and empowerment of rural people.

**Unit 8: Entrepreneurial Development**

Concept, significance and scope. Programmes and agencies promoting entrepreneurship. Types and techniques of training for developing entrepreneurial activities in various areas. Self Help Groups-concepts, organisation, mobilization, micro-finance and functioning of SHG for empowerment and sustainability. Agripreneurship-agriclinics and agribusiness centers. International cooperation in agriculture-SAIC, Commonwealth, FAO, USAID, DFID and CGIAR system. Critical analysis of extension systems of SAARC, BRICS and other selected countries (USA, UK, Japan, Philippines, Israel etc.).

**Unit 9: Developmental Strategies and Issues in Extension**

Extension policies. National Agricultural Extension System and Networking of State development Departments, NARS, NGOs, producers companies, agricultural co-operatives, rural banks, insurance and private sectors. History of Veterinary extension programmes-NPCBB, PM assistance livestock development programmes and rural development programmes. Developmental strategies such as Watershed Development Programmes; Technology Mission, Horticulture Mission. Front Line Extension Programmes of ICAR/TAR-IVLP, NATP, NAIP, IRDP, ATMA, ITD, SREP, Research-Extension-Farmer-Interface. Identification, characterization, documentation and validation of ITKs. Privatization of extension, market led extension, production to consumption and end to end innovative approaches. Issues related to globalization and IPR. Rural, Agricultural, Animal Husbandry, Dairy and Women Developmental Programmes implemented by Govt. of India. Krishi Vigyan Kendras (KVKs).

**Unit10:Gender Sensitization and Empowerment**

Gender and empowerment: meaning, gender related definitions and importance for empowering women; need and focus on gender sensitization, gender in community diversity and its implication for empowerment. Gender perspectives in development of women, social characteristics, roles, responsibilities, resources, constraints, legal issues and opportunities; economical, educational and other parameters. Gender tools and methodologies: Dimensions and methodologies for empowerment; gender budgeting; gender analysis framework- context, activities, resources and programme action profile; technologies and empowerment - gender specific technologies, household technology interface, socio-cultural interface and women as consumer of technologies. Gender issues and development: health and nutrition, violence, governance, education and media.

**Note-** Ask atleast 5 Question from each unit.