

**DEPARTMENT OF VETERINARY & ANIMAL HUSBANDRY  
EXTENSION EDUCATION**

**SEMESTER- V**

**PRINCIPLES AND TECHNIQUES OF VETERINARY AND  
ANIMAL HUSBANDRY EXTENSION**

**VAE- 311**

**Credit Hours 2+1=3**

**THEORY**

Concept of Sociology. Man-animal relationship (Society, Community, Association, institutions). Difference in livestock production practices of rural, urban and tribal communities including rearing patterns. Social change and factors of change. Social groups, its types and functions. Social transformation in relation to animal rearing.

Evolution of veterinary and animal husbandry extension in India. Extension education: definition, philosophy and principles. Concept of Community development Teaching learning process, steps of teaching. Extension teaching methods; their classification and use. Information delivery system in Veterinary and Animal Husbandry extension. Information communication technology.

Role of animals in economy, health and socio-psychology of rural, semi urban and urban society. Client and stakeholder dealings: techniques and procedures including tools for data

collection, analysis, history taking, follow-up and appraisal on prognosis. Adoption and diffusion of livestock innovations. Leadership and role of leaders in animal husbandry extension.

Farming in rural India - large and small scale farming, mixed farming, co-operative and collective farming, contractual farming, Co-operative Farming for Live Stock Production, Advantages and limitations of cooperatives. Economic principles underlying co-operative societies, co-operative milk unions in India Social survey and its types. Social sampling. Identification of key communicators and operating through them. Identifying organizational difficulties in the way of organizing animal husbandry extension programmes. Identification of constraints in the adoption of improved animal husbandry practices. Animal Husbandry programme planning and evaluation. Feedback evaluation of extension programmes and their impact analysis. Panchayati Raj Institutions, Krishi Vigyan Kendra (KVK), Animal Husbandry Development Programmes in Cattle, buffalo, sheep , goat poultry, rabbit and piggery.- Key village scheme, Gosadan/Goshala. Integrated Cattle Development Programme (ICDP), Integrated Rural Development Programme (IRDP), Agricultural Technology Management Agency (ATMA). Gender considerations in Veterinary practice. Changing expectations from new recruits to the profession and employers of veterinarians. Growing changes in corporate, client influence and changes in work ethics. Information communication technologies. Virtual class room and self learning. E-learning. Information kiosks. Agriculture portals. E-commerce- scope and local application. Computer aided teaching/learning, web-sites dedicated to veterinary and animal sciences education, web directories and virtual learning institutions (e-institutions).

## **PRACTICAL**

Audio-visual equipments. Principles and use of overhead, slide and multimedia projectors, digital video/still camera. Preparation and use of visual aids like posters, charts, flash cards, flipcharts, etc. Use of literature and media in Extension. Identification of key elements in social sampling of data. Collection and analysis of data. Identification of key communicators and operation programme. Enumeration of organizational difficulties in animal husbandry extension programmes. Identification of constraints in the adoption of improved animal husbandry practices. Constraint analysis.

Group discussions, techniques and procedures for awareness campaigns on different veterinary and animal husbandry practices - signs of diseases, preservation of eggs, clean milk production, controlling of ectoparasites, pail feeding of calves, sexing and culling of birds, first aid for minor wounds, disinfection of byres, branding, use of horn cauterization, timely A. I., choice of good progeny, care in pregnancy, infertility, environments! hygiene, preparation of feeds and feeding schedules, deworming, preventive hygiene, vaccination etc. Organization of animal welfare camps, exhibition, livestock shows etc. Hands on training in the use of computers for teaching and information dissemination. Rapid Rural Appraisal/Participatory Rural Appraisal in identifying livestock production/health care practices.

## **REFERENCE BOOKS**

1. **Adams, M. E.** 1982. Agricultural Extension in developing countries. ELBS with Longman & Scientific and Technical , Essex, England

2. **Falvey, L and Chantalakhana, C.** (eds).1999. Small Holder Dairying in the Tropics, ILRI (International Livestock Research Institute), Nairobi, Kenya
3. **Jerving, C.** 1996. Managing a Veterinary Practice. W. B. Saunders Company Ltd. London
4. **Kulandaiswamy, V.** 1986. Co-operative Dairying in India. Rainbow Publications, Coimbatore.
5. **Oakley, P and Garforth, C.** 1985. Guide to Extension Training. FAO of the United Nations, Rome
6. **Ramkumar, S., Garforth, C., Rao S.V.N. and Waldie, K** (eds).2001. Landless Livestock Farming : Problems and prospects. *Proceedings of the Workshop* held on 29 January 2001, RAGACOVAS, Pondicherry
7. **Sandhu, A.S.**1993. Textbook on Agricultural Communication : Process and methods. Oxford and IBH Publishing Co. Pvt. Ltd.
8. **Sastry, N.S.R, Reddy, D.P.R. and Hermon,R.R.** 1993. Planning for Development of Animal Husbandry Sector. National Institute of Rural Development, Hyderabad
9. **Sastry, N. S. R and Thomas, C. K.** 2005. Livestock Production Management, Kalyanai Publishers, Ludhiana: Chapters on “ *Extension and livestock development, Livestock Extension, Participatory and Rapid Rural Appraisal*”
10. **Swanson, B.E.** (ed), 1993. Agricultural Extension- A Reference Manual. FAO of The United Nations, Rome
11. **Van den Ban A. W & Hawkins. H. S.** 1996. Agricultural Extension. Blackwell Sciences, Oxford.
12. **Waldie,K. and Ramkumar. S.** 2002. Landless women and dairying: the opportunities for development within a poverty perspective”.RAGACOVAS, Pondicherry
13. **Chitambar, J.B** (1993). Introductory Rural Sociology.
14. **Kuppuswamy,B.** (1994). Social Change in India
15. **Indian Society of Agricultural Economics** (1989). Livestock Economy of India.

16. **Dahama, O.P & O.P.Bhatnagar** (1994). Education and Communication for development.
17. **Hans Raj** (1992). Theory and Practice in Social Research.
18. **Directorate of Extn. Govt. of India** (1961). Extension Education in Community development

## **SEMESTER- VI**

### **LIVESTOCK ECONOMICS, MARKETING AND BUSINESS MANAGEMENT**

**VAE-321**

**Credit Hours 2+1=3**

#### **THEORY**

##### **Economics:**

Introduction, definition and scope (production, consumption, exchange and distribution) of economic principles as applied to livestock. Common terms - wants, goods, wealth, utility, price, value, real and money income. Important features of land, labour, capital and organization.

Livestock produce and products. Livestock contributions to national economy. Demand projections of livestock produce. Theory of consumer behaviour law of diminishing marginal utility and indifference curve analysis. Theory of demand; meaning, types of demand, demand curve and law of demand, individual and market demand, elasticities of demand and factors affecting demand. Laws and types of supply. Elasticity of supply. Cost concepts and principle of fixed and variable costs. Theory of production, law of diminishing returns, laws of returns to scale and concept of short and long run periods. Economics of animal disease and disease losses.

##### **Marketing:**

Livestock business- concepts, nature and scope. Components, characteristic of small business. Marketable livestock commodities. Concept of market; meaning and classification of markets. Market price and normal price, price determination under perfect competition in short and long run. Marketing of livestock, and perishable and non-perishable livestock products. Merchandising - product planning and development Marketing functions; exchange functions- buying, selling and demand creation. Physical functions- grading, transportation, storage and warehousing. Facilitative functions -standardization, risk bearing, market information and market intelligence. Market opportunities - marketing channels of livestock and livestock products, organized/unorganized markets and cattle fairs. Import and export of animal and animal products. International Agreements/Regulations (WTO and General Agreement on Trade and Tariff-GATT) for marketing/trade of live animals and products. Management:

Resource Management- Organizational aspects of livestock farms, sources and procurement of inputs and financial resources. Break- even - analysis. Personnel (Labour) Management- Identification of work and work (job) analysis/division of labour.

##### **Accounting:**

Definition, objectives, common terms. Different systems of book keeping- single and double entry system. Various types of account books including books of original entry. Classification

of accounts and rules of debit and credit Recording of business transactions. Analysis of financial accounts- income and expenditure accounts, trading account, profit and loss accounts.

### **PRACTICAL**

Book keeping; general entry, writing of journal and ledger, cash book (two and three column), purchase-safe and purchase-sale return registers, trading account, profit and loss accounts, income and expenditure accounts, balance sheet bills of exchange (bill of receivable and bill of payable), bank reconciliation statement,.

Economics of a dairy unit poultry, piggery, sheep and goat units. Visit to" farms, markets and cattle fairs, backyard units and preparation of report.

### **REFERENCE BOOKS**

1. **Acharya, S. S & Agarwal N.L** (1994) Agriculture marketing in India, Oxford.
2. **Johl, S. S.& Kapur, T.R.** (2005) Fundamentals of farm business management
3. **Indian Society** (1989) Livestock Economy of India Agricultural Economics: Oxford and IBH Publications
4. **Sadhu & Singh** (1989) Fundamentals of Agricultural Economics: Himalaya Publishing House.
5. **Singh, G.N. Singh .D.S & Ram Iqbal Singh** (1987) Agricultural Marketing in India: Chugh Publications
6. **Maheswari & Maheswari** (1993) Advanced Accountancy 5<sup>th</sup> ed. Volume –I
7. **Seth. M.L.** (1994) Micro Economics 12<sup>th</sup> Ed.
8. **Dewitt, K.K.** (1984) Modern Economic Theory 21<sup>st</sup> Edition.
9. **James, A.F.Stoner & Charles Wankel** (1988) Management 3<sup>rd</sup> Edition

## **SEMESTER- IX**

### **LIVESTOCK ENTREPRENEURSHIP**

**VAE-511**

**Credit Hours 1+0=1**

#### **THEORY**

Livestock Entrepreneurship. Avenues of entrepreneurship/employment in private and public sectors. Key concepts and theories of self-employment and entrepreneurship. Essential criteria for development of entrepreneurship in livestock sector - basic requirements for entrepreneurship initiatives in livestock and allied sectors (i.e. techno economic feasibility of the enterprises under different conditions, training and management skills, business acumen,

business communication, inter-personnel skills for establishing an enterprise, etc.). Entrepreneurial training/development programmes at the State and National level. Animal Insurance. Bank support for entrepreneurship. Financial credit and financial management-general Principles and practices, analysing project appraisals and reports, capital, expenditure decisions, reinvestment and payback. Preparing projects for bank appraisal, banking requirements. Assessing project profits. Procurement management quality issues, standardisation, grading and packaging. Marketing channels. Retail marketing, sales operations and management advertising, marketing of services. Expectations from a Veterinary professional. Eco-jobs and sustainable development through livestock. Approach to preparation of Entrepreneurial Project on livestock.

## **REFERENCE BOOKS**

1. **Alan ,L. Carsrnd & Malin ,E. Brannback** (2007) Entrepreneurship : Greenwood Publishing group
2. **Peter Ducker** Innovation and Entrepreneurship : Harper Bus. Publisher.
3. **Null** Successful Entrepreneurs Guide book: Manotar Publishers
4. Entrepreneur Starter Kit six cds : Coach series
5. **Miner John, B.** The 4 steps to Entrepreneurial success: Berett – ICO
6. **Birley Sre** Masteries Entrepreneurship, Financial Publishers