

B. Sc. (Hons) Agriculture

Agricultural Economics

- **Syllabus**
- **Teaching Schedule**
- **Suggested Readings**

B. Sc. (Hons) Agriculture
Departmentwise list of courses

Agricultural Economics

Sr. No.	Semester	Course No.	Credits	Course Title
1	II	ECON 121	2(2+0)	Fundamentals of Agricultural Economics
2	IV	ECON 242	3(2+1)	Agricultural Finance and Cooperation
3	V	ECON 353	3(2+1)	Agricultural Marketing Trade and Prices
4	V	ELE ECON 354	3(2+1)	Agribusiness Management
5	VI	ECON 365	2(1+1)	Farm Management, Production and Resource Economics

Course :	ECON 121		Credit:	2(2+0)	Semester-II
Course title:	Fundamentals of Agricultural Economics				

Syllabus

Theory

Economics: Meaning, scope and subject matter, definitions, activities, approaches to economic analysis; micro and macroeconomics, positive and normative analysis. Nature of economic theory; rationality assumption, concept of equilibrium, economic laws as generalization of human behavior. Basic concepts: Goods and services, desire, want, demand, utility, cost and price, wealth, capital, income and welfare.

Agricultural economics: meaning, definition, characteristics of agriculture, importance and its role in economic development. Agricultural planning and development in the country.

Demand: meaning, law of demand, demand schedule and demand curve, determinants, utility theory; law of diminishing marginal utility, equi-marginal utility principle. Consumer's equilibrium and derivation of demand curve, concept of consumer's surplus. Elasticity of demand: concept and measurement of price elasticity, income elasticity and cross elasticity.

Production: process, creation of utility, factors of production, input output relationship. *Laws of returns:* Law of variable proportions and law of returns to scale.

Cost: Cost concepts, short run and long run cost curves. Supply: Stock v/s supply, law of supply, supply schedule, supply curve, determinants of supply, elasticity of supply.

Market structure: meaning and types of markets, basic features of perfectly competitive and imperfect markets. Price determination under perfect competition; short run and long run equilibrium of firm and industry, shut down and break even points.

Distribution theory: meaning, factor market and pricing of factors of production. Concepts of rent, wage, interest and profit.

National income: Meaning and importance, circular flow, concepts of national income accounting and approaches to measurement, difficulties in measurement. Population: Importance, Malthusian and Optimum population theories, natural and socio-economic determinants, current policies and programmes on population control.

Money: Barter system of exchange and its problems, evolution, meaning and functions of money, classification of money, money supply, general price index, inflation and deflation. Banking: Role in modern economy, types of banks, functions of commercial and central bank, credit creation policy.

Agricultural and public finance: meaning, micro v/s macro finance, need for agricultural finance, public revenue and public expenditure. *Tax:* meaning, direct and indirect taxes, agricultural taxation, VAT. *Economic systems:* Concepts of economy and its functions, important features of capitalistic, socialistic and mixed economies, elements of economic planning.

Teaching Schedule

Lecture No.	Topic/Lesson	Weightage
1	<i>Economics</i> : Meaning, subject matter scope and definitions of economics, divisions of economics-Traditional and Modern Approach	6
2	Approaches to economic analysis; micro and macroeconomics, positive and normative analysis- Deductive and Inductive methods of investigation	
3	Nature of economic theory; rationality assumption, concept of equilibrium, economic laws as generalization of human behavior.	
4	Basic concepts: Goods and services, classification of goods, characteristics of goods and services, desire, want, demand, utility, Cardinal and Ordinal approaches, Characteristics of utility - Forms of utility. Cost and price, wealth, capital, income and welfare, Classification of Wealth	4
5	Agricultural economics: meaning, definition, characteristics of agriculture, importance and its role in economic development.	4
6	Cardinal approach/utility theory, Law of Diminishing Marginal Utility – statement, assumptions of law, explanation, limitations of the law, Importance	5
7	Law of Equi-marginal Utility – Meaning, Assumptions, Explanation of the Law, Practical Importance, Limitations	5
8	Consumer's Surplus – Meaning, Assumptions, Explanation, Difficulties in measuring Consumer's Surplus, Importance. Ordinal Approach-Consumer's equilibrium, indifference curve analysis	5
9	Demand – Meaning, Definition, Types of demand - income demand, price demand, cross demand. Demand schedule , demand curve, Law of demand – contraction and extension, increase and decrease in demand, Determinants of demand	5
10	Elasticity of demand – Definition, elastic and inelastic demand, kinds of elasticity of demand, perfectly elastic, perfectly inelastic, relatively elastic, relatively inelastic, unitary elastic demand. Types of elasticity of demand , Price elasticity, income elasticity and cross elasticity of demand, factors affecting demand , practical importance of elasticity of demand	5
11	Production: meaning, process, creation of utility, factors of production, input output relationship.	10
12	<i>Laws of returns</i> : Law of variable proportions and law of returns to scale	
13	<i>Cost</i> : Cost concepts, short run and long run cost curves	

Lecture No.	Topic/Lesson	Weightage
14	Supply – meaning, definition, law of supply, supply schedule, supply curve. Increase and decrease in supply, contraction and extension in supply, factors affecting supply.	7
15	Elasticity of supply, kinds of elasticity of supply – perfectly elastic, perfectly inelastic, relatively elastic, relatively inelastic and unitary elastic - factors affecting elasticity of supply.	
16	Market structure: meaning and types of market, basic features of perfectly competitive and imperfect markets.	6
17	Price determination under perfect competition;	
18	Short run and long run equilibrium of firm and industry, shut down point, normal & super normal profits	
19	Distribution theory: meaning, factor market and pricing of factors of production.	4
20	Concepts of rent, wage, interest and profit.	
21	<i>National income</i> : Meaning and importance, circular flow, concepts of national income accounting- Gross domestic product, gross national product, net national product, net domestic product- national income at factor cost, personal income, disposable income	10
22	Methods/Approaches of measurement of NI – product method, income method and expenditure method, Difficulties in measurement.	
23	Population: Importance, Malthusian and Optimum population theories,	5
24	Natural and socio-economic determinants, current policies and programmes on population control.	
25	Money: Barter system of exchange and its problems, evolution, meaning and functions of money,	5
26	Classification of money, money supply,	
27	General price index, inflation and deflation.	3
28	Central bank functions and important policies	4
29	Public revenue and public expenditure	
30	<i>Tax</i> : meaning, direct and indirect taxes, agricultural taxation, VAT.	3
31	<i>Economic systems</i> : Concepts of economy and its functions	4
32	Important features of capitalistic, socialistic and mixed economies, elements of economic planning.	
	Total	100

Suggested Readings:

- 1) Dewett, K.K. and Chand, A.2009 Modern Economic Theory S.Chand and Co., New Delhi
- 2) Dewett, K.K. and Varma, J.D. 1986 Elementary Economics S.Chand and Co., New Delhi.
- 3) Jhingan, M.L.1990 Advanced Economic Theory Vikas Publishing House, New Delhi
- 4) Subba Reddy, S, Raghu Ram, P., Sastry, T.V.N. and Bhavani Devi, I. 2010
- 5) Agricultural Economics Oxford & IBH Publishing Co., Pvt. Ltd., New Delhi
- 6) Nagpure S.C., and Patil E.R.2011,2014, Principles of Agricultural Economics by, Agroment Publishers, 52 B, Indraprasta, Opp. AshaMangal, Dharampeth, Nagpur-440010(MS)India.

Course :	ECON 242		Credit:	3(2+1)	Semester-IV
Course title:	Agricultural Finance and Cooperation				

Syllabus

Theory

Agricultural Finance- meaning, scope and significance, credit needs and its role in Indian agriculture. Agricultural credit: meaning, definition, need, classification. Credit analysis: 4 R's, and 3C's of credits. Sources of agricultural finance: institutional and non-institutional sources, commercial banks, social control and nationalization of commercial banks, Micro financing including KCC. Lead bank scheme, RRBs, Scale of finance and unit cost. An introduction to higher financing institutions – RBI, NABARD, ADB, IMF, world bank, Deposit Insurance and Credit Guarantee Corporation of India. Cost of credit. Recent development in agricultural credit. Preparation and analysis of financial statements – Balance Sheet and Income Statement. Basic guidelines for preparation of project reports- Bank norms – SWOT analysis.

Agricultural Cooperation – Meaning, brief history of cooperative development in India, objectives, principles of cooperation, significance of cooperatives in Indian agriculture. Agricultural Cooperation in India- credit, marketing, consumer and multi-purpose cooperatives, farmers' service cooperative societies, processing cooperatives, farming cooperatives, cooperative warehousing; role of ICA, NCUI, NCDC, NAFED.

Practical

Determination of most profitable level of capital use. Optimum allocation of limited amount of capital among different enterprise.

Analysis of progress and performance of cooperatives using published data. Analysis of progress and performance of commercial banks and RRBs using published data.

Visit to a commercial bank, cooperative bank and cooperative society to acquire firsthand knowledge of their management, schemes and procedures.

Estimation of credit requirement of farm business – A case study.

Preparation and analysis of balance sheet – A case study.

Preparation and analysis of income statement – A case study.

Appraisal of a loan proposal – A case study.

Techno-economic parameters for preparation of projects. Preparation of Bankable projects for various agricultural products and its value added products.

Seminar on selected topics.

Teaching Schedule

a) Theory

Lecture No.	Topic/Lesson	Weightages
1, 2	Definition of agricultural finance – nature – scope - meaning - significance - micro & macro finance	4
3, 4	Credit needs in agriculture – meaning and definition of credit - classification of credit based on time, purpose, security, lender and borrower	8
5, 6	Credit analysis - Economic feasibility tests- Returns to investment, Repayment capacity and Risk bearing ability (3Rs)	8
7, 8	Five Cs of credit - Character, Capacity, Capital, Condition and Common sense and Seven Ps of credit - Principle of productive purpose, Principle of personality, Principle of productivity, Principle of phased disbursement, Principle of proper utilization, Principle of payment and Principle of protection	6
9, 10	Methods and mechanics of processing loan application.	5
11, 12	Repayment plans: Lump sum repayment /straight-end repayment, Amortized decreasing repayment, Amortized even repayment, Variable or quasi variable repayment plan, Future repayment plan and Optional repayment plan	6
13, 14	Recent trends in agricultural finance - Social control and Nationalization of Banks	5
15, 16	Lead Bank Scheme – origin – objectives - functions and progress; Regional Rural Banks (RRBs) – origin – objectives – functions – progress - RRBs in Andhra Pradesh	8
17, 18	Crop Loan System: objectives – importance - scale of finance – estimation – Term Loans – objectives and interest rates, kisan credit card	8
19, 20	Schemes for financing weaker sections - Differential Interest Rate (DIR), Integrated Rural Development Programme (IRDP), Ganga KalyanYozana (GKY), Swarnajayanti Gram SwarozgarYojana (SGSY), Self Help Groups etc.	8
21, 22	Crop Insurance - meaning and its advantages - progress of crop insurance scheme in India - limitations in application - Agricultural Insurance Company of India – National Agricultural Insurance scheme (NAIS) - salient features - Weather insurance	5

Lecture No.	Topic/Lesson	Weightages
23,24 & 25	Higher Financing Agencies - Reserve Bank of India (RBI) - origin – objectives and functions - role of RBI in agricultural development and finance; National Bank for Agricultural and Rural Development (NABARD) - origin, functions, activities and its role in agricultural development; International Bank for Reconstruction and Development (IBRD); International Monetary Fund (IMF); International Development Agency (IDA); Asian Development Bank (ADB); Deposit Insurance and Credit Guarantee Corporation of India	8
26	Co-operation – meaning - scope, importance and definition - principles - objectives of co-operation	6
27, 28	Origin and history of Indian cooperative movement – cooperative movement during pre-independence period - progress of cooperative movement during post-independence period	4
29, 30	Shortcomings of Indian co-operative movement and remedies - recommendations of various committees – development of cooperative credit and non-credit organizations- co-operative credit structure	4
31, 32	Classification of co-operative credit institutions - Short Term (ST), Medium Term (MT) and Long Term (LT) Credit – Primary Agricultural Cooperative Credit Societies (PACS) - Farmers Service Societies (FSS) - Multi-Purpose Cooperative Credit Societies (MPCS) and Large-Sized Adivasi Multipurpose Cooperative Societies (LAMPS) - Objectives and functions - Reorganization of Rural Credit Delivery System and concept of single window system – Andhra Pradesh mutually aided Co-operative Societies Act,1995	7
	Total	100

b) Practical

Exercise No	Topics
1	Working out the various repayment plans
2	Study of commercial banks/ RRB
3	Study of NABARD
4	Study of PACS/ DCCB

Exercise No	Topics
5	Study of SHGs
6	Estimation of scale of finance
7	Estimation of indemnity
8	Estimation of credit limits under Kisan Credit Card
9	Study of FSS
11	Study of Dairy co-operatives/ any other co-operative institution
12	Appraisal of loan proposal-A case study
13	Techno-Economic parameters for preparation of projects
14	Preparation of bankable projects for various agricultural products and its value added products
15	Seminar on selected topics
16	Final Practical Examination

Suggested Readings:

- 1) Ghosal, S.N., Agricultural Financing in India, Asia Publishing House, Bombay, 1966
- 2) Johl, S.S. and C.V. Moore., Essentials of Farm Financial Management, Today and Tomorrow's Printers and Publishers, New Delhi, 1970
- 3) John, J. Hampton., Financial Decision Making: Concepts, Problems and Cases, Prentice-Hall of India , New Delhi, 1983
- 4) Kenneth, Duft D., Principles of Management in Agribusiness, Reston Publishing Company, Reston, 1979
- 5) Mamoria, C.B. and R.D. Saksena., Co-operation in India, KitabMahal, Allahabad, 1973
- 6) Mamoria, C.B. and Saksena., Agricultural Problems in India, KitabMahal, Allahabad
- 7) Mukhi, H R. Cooperation in India and Abroad. New Heights Publishers, New Delhi, 1983
- 8) Muniraj, R., Farm Finance for Development, Oxford & IBH Publishing Company Private Ltd., New Delhi, 1987
- 9) Subba Reddy, S. and P.Raghuram., Agricultural Finance and Management, Oxford & IBH Publishing Company Private Ltd., New Delhi, 2005
- 10) Subba Reddy, S., P.Raghuram., P. Sastry, T.V.N. and Bhavani Devi I. Agricultural Economics., Oxford & IBH Publishing Company Private Ltd., New Delhi, 2010
- 11) William, G. Murray and Nelson Aarson, G., Agricultural Finance, The Iowa State University Press, Ames, Iowa, 1960

Course :	ECON 353		Credit:	3(2+1)	Semester-V
Course title:	Agricultural Marketing Trade and Prices				

Syllabus

Theory

Agricultural Marketing: Concepts and definitions of market, marketing, agricultural marketing, market structure, marketing mix and market segmentation, classification and characteristics of agricultural markets; demand, supply and producer's surplus of agri-commodities: nature and determinants of demand and supply of farm products,

Producer's surplus – meaning and its types, marketable and marketed surplus, factors affecting marketable surplus of agri-commodities; product life cycle (PLC) and competitive strategies: Meaning and stages in PLC; characteristics of PLC; strategies in different stages of PLC; pricing and promotion strategies: pricing considerations and approaches – cost based and competition based pricing; market promotion – advertising, personal selling, sales promotion and publicity – their meaning and merits & demerits; marketing process and functions:

Marketing process-concentration, dispersion and equalization; exchange functions – buying and selling; physical functions – storage, transport and processing; facilitating functions – packaging, branding, grading, quality control and labeling (Agmark); Market functionaries and marketing channels: Types and importance of agencies involved in agricultural marketing; meaning and definition of marketing channel; number of channel levels; marketing channels for different farm products; Integration, efficiency, costs and price spread: Meaning, definition and types of market integration; marketing efficiency; marketing costs, margins and price spread; factors affecting cost of marketing; reasons for higher marketing costs of farm commodities; ways of reducing marketing costs;

Role of Govt. in agricultural marketing: Public sector institutions- CWC, SWC, FCI, CACP & DMI – their objectives and functions; cooperative marketing in India; Risk in marketing: Types of risk in marketing; speculation & hedging; an overview of futures trading; Agricultural prices and policy: Meaning and functions of price; administered prices; need for agricultural price policy;

Trade: Concept of International Trade and its need, theories of absolute and comparative advantage. Present status and prospects of international trade in agri-commodities; GATT and WTO; Agreement on Agriculture (AoA) and its implications on Indian agriculture; IPR.

Practical

Plotting and study of demand and supply curves and calculation of elasticities; Study of relationship between market arrivals and prices of some selected commodities; Computation of marketable and marketed surplus of important commodities; Study of price behaviour over time for some selected commodities; Construction of index numbers; Visit to a local market to study various marketing functions performed by different agencies, identification of marketing channels for selected commodity, collection of data regarding marketing costs, margins and price spread and presentation of report in the class; Visit to

market institutions – NAFED, SWC, CWC, cooperative marketing society, etc. to study their organization and functioning; Application of principles of comparative advantage of international trade.

Teaching Schedule

a) Theory

Lecture	Topic/Lesson	Weightage
1	Market and Marketing – Meaning – Definitions – Components of market – Market structure – Meaning – Components – Market conduct – Market performance	2
2	Agricultural Marketing – Meaning – Definition – Scope – Subject matter – Importance of Agricultural Marketing in economic development.	2
3	Classification of markets – On the basis of location, Area of coverage, time span, volume of transaction, nature of transaction, number of commodities, degree of competition, nature of commodities, stage of marketing, extent of public intervention, type of population served, accrual of marketing margins	4
4	Marketing mix and market segmentation,	2
5	Demand, supply and producer's surplus of agri-commodities: nature and determinants of demand and supply of farm products,	2
6	Producers surplus- Meaning- Marketable surplus- Marketed surplus-importance- factors influencing marketable surplus- Marketing channels - Definition	3
7	Product life cycle (PLC) and competitive strategies: Meaning and stages in PLC; characteristics of PLC;	4
8	Strategies in different stages of PLC; pricing and promotion strategies:	3
9	Pricing considerations and approaches –cost based and competition based pricing;	3
10	Market promotion – advertising, personal selling, sales promotion and publicity – their meaning and merits & demerits;	4
11	Marketing process and functions: Marketing process-concentration, dispersion and equalization;	3
12	Marketing functions – Meaning -exchange functions – buying and selling;	2
13	Physical functions – storage, transport and processing	3
14	Facilitating functions – packaging, branding, grading, quality control and labeling (Agmark);	4
15	Market functionaries and marketing channels: Types and importance of agencies involved in agricultural marketing;	5
16	Meaning and definition of marketing channel; number of channel levels; marketing channels for different farm products;	4

Lecture	Topic/Lesson	Weightage
17	Market integration-definition-types of market integration-horizontal, vertical and conglomeration-	4
18	Marketing efficiency-meaning-definitions-technical or physical or operational efficiency-pricing or allocative efficiency	5
19	Marketing cost-margins-price spread-factors affecting the costs of marketing-reasons for higher marketing costs of agricultural commodities- ways of reducing marketing costs for farm products.	3
20	Role of Govt. in agricultural marketing- Remedial measures-Regulated markets-definition-important features of regulated markets, functions, progress and defects	4
21	Public sector institutions- Warehousing-meaning- warehousing in India - Central Warehousing Corporation(CWC)- working of warehouses -advantages- State Warehousing Corporations (SWC)- Food Corporation of India(FCI)-objectives- functions	3
22	Characteristics of agricultural product prices-agricultural price stabilization-need for agricultural price policy- commission for Agricultural cost and Prices (CACP)- administered prices-minimum support price, procurement price and issue price.	3
23	Cooperative marketing- meaning-structure- Functions of cooperative marketing societies-.	2
24	National Agricultural Cooperative Marketing Federation (NAFED) and State Agricultural Cooperative Marketing Federations (MARKFED)- State Trading-objectives-Types of state trading.	4
25	Risk in marketing: Types of risk in marketing;	3
26	Speculation & hedging; an overview of futures trading;	2
27	Characteristics of agricultural product prices-agricultural price stabilization-need for agricultural price policy- commission for Agricultural cost and Prices (CACP)- administered prices-minimum support price, procurement price and issue price	4
28	Trade: Concept of International Trade and its need, International trade-definition-difference between international and inter-regional trade- free trade vs protection.	3
29	Theories of absolute and comparative advantage.	3
30	Present status and prospects of international trade in agri-commodities; GATT and WTO;	2
31	Agreement on Agriculture (AoA) and its implications on Indian agriculture;Trade Related Intellectual Property Rights(TRIPS)	2
32	Market and Marketing – Meaning – Definitions – Components of market – Market structure – Meaning – Components – Market conduct – Market performance	3
	Total	100

b) Practical

Exercise	Topic
1	Plotting and study of demand and supply curves
2	Calculation of elasticities
3	Study of relationship between market arrivals and prices of some selected commodities
4	Computation of marketable and marketed surplus of important commodities
5	Study of price behaviour over time for some selected commodities;
6	Visit to a local market to study various marketing functions performed by different agencies,
7	Visit to regulated market
8	Identification of marketing channels for selected commodity
9	Collection of data regarding marketing costs, margins and price spread.
10	Presentation of report in the class.
11	Visit to market institution – NAFED to study their organization and functioning.
12	Visit to SWC to study their organization and functioning.
13	Visit to CWC to study their organization and functioning.
14	Visit to cooperative marketing society to study their organization and functioning.
15	Application of principles of comparative advantage of international trade.
16	Final practical exam.

Suggested Readings:

- 1) Acharya S.S and Agarwal NL, 2006, Agricultural Marketing in India. Oxford & IBH Publishing Co.Pvt.Ltd. New Delhi
- 2) Kahlon, A.S and Tyagi.D S, 1983 Agricultural Price Policy in India. Allied Publishers Pvt. Ltd., New Delhi.
- 3) Kulkarni, K R.1964, Agricultural Marketing in India. The Co-operators Books Depot, Mumbai.
- 4) Mamoria, C.B. and Joshi. R L.1995, Principles and Practices of Marketing in India, KitabMahal, Allahabad
- 5) Mamoria, C.B., 1973., Agricultural Problems in India, KitabMahal, Allahabad
- 6) Subba Reddy, S., P.Raghu Ram., P. Sastry, T.V.N. and Bhavani Devi I. 2010. Agricultural Economics., Oxford & IBH Publishing Company Private Ltd., New Delhi, 2010

Course :	ELE ECON 354		Credit:	3(2+1)	Semester-V
Course title:	Agribusiness Management				

Syllabus

Theory

Transformation of agriculture into agribusiness, various stakeholders and components of agribusiness systems. Importance of agribusiness in the Indian economy and New Agricultural Policy. Distinctive features of Agribusiness Management: Importance and needs of agro-based industries, Classification of industries and types of agro based industries. Institutional arrangement, procedures to set up agro based industries. Constraints in establishing agro-based industries. Agri-value chain: Understanding primary and support activities and their linkages. Business environment: PEST & SWOT analysis. Management functions: Roles & activities, Organization culture. Planning, meaning, definition, types of plans. Purpose or mission, goals or objectives, Strategies, policies procedures, rules, programs and budget. Components of a business plan, Steps in planning and implementation. Organization staffing, directing and motivation. Ordering, leading, supervision, communications, control. Capital Management and Financial management of Agribusiness. Financial statements and their importance. Marketing Management: Segmentation, targeting & positioning. Marketing mix and marketing strategies. Consumer behavior analysis, Product Life Cycle (PLC). Sales & Distribution Management. Pricing policy, various pricing methods. Project Management definition, project cycle, identification, formulation, appraisal, implementation, monitoring and evaluation. Project Appraisal and evaluation techniques.

Practical

Study of agri-input markets: Seed, fertilizers, pesticides. Study of output markets: grains, fruits, vegetables, flowers. Study of product markets, retails trade commodity trading, and value added products. Study of financing institutions- Cooperative, Commercial banks, RRBs, Agribusiness Finance Limited, NABARD. Preparations of projects and Feasibility reports for agribusiness entrepreneur. Appraisal/evaluation techniques of identifying viable project- Non-discounting techniques. Case study of agro-based industries. Trend and growth rate of prices of agricultural commodities. Net present worth technique for selection of viable project. Internal rate of return.

Teaching Schedule

a) Theory

Lecture	Details of Topic	Weightage
1	Agribusiness: Meaning of Agribusiness, Definition of Agribusiness, Transformation of agriculture into agribusiness, Various stakeholders and components of Agribusiness systems. Agricultural Input Sector, Production Sector, Processing Manufacturing Sector, Distribution-Marketing Sector.	5
2, 3 & 4	Importance of Agribusiness in Indian Economy New Agricultural Policies National Agril. Policy, National Seed Policy, National Price Policy, National Food Processing Policy, National Foreign Trade Policy, National Fishery Policy, National Food Security Policy, National Food & Biotech, National Transportation of Food, National Nutrient Based Subsidy	4
5 & 6	Agro-based Industries: Importance of Agro based Industries ,Need of Agro based Industries, Classification of Agro based Industries, Types of Agro based Industries- Sugar Mills, Cotton Ginning Mills, Dal Mills, Rice Mills, Poha Mills, Fruit Processing Industries etc. Institutional Arrangement- Ministry of Agriculture (GOI), Financial Institutions, NABARD, NCDC, NDDDB, NCUI, APEDA, ICAR, NAFED, FCI, CWC, NHM, CFTRI, EPO	7
7	Procedure to set up agro-based Industries Constraints in establishing Agro based Industries	4
8 & 9	Agricultural Value Chain : Value Chain Concept Primary activities and support activities and their linkages, Supply Chain v/s. Value Chain, Vertical Corporation, Horizontal relation, Nature of Association. Business Process and Agribusiness Supply Chain- Production, Processing/Manufacturing, Wholesaling, Retailing, Logistics, Supply Network	5
10	Business Environment PEST Analysis(Political, Economic, Social & Technological) SWOT Analysis (Strengths, Weaknesses Opportunities and Threats)	3
11	Management Functions: Role and Activities, Organization Culture, Functions of Management- Planning, Organizing, Directing, Controlling, Coordinating, Financing	2
12	Planning Meaning, Definition of Planning, Function of Planning, Types of Plan/Planning Process- Purpose, Objective, Policies, Procedure, Practices, Characteristics of Sound Plan	4
13	Rules, Programmes and Budget for Planning Components of Business Plan	3

Lecture	Details of Topic	Weightage
14	Steps in Planning and Implementation Gathering Facts, Analyzing Facts, Forecasting Change, Setting Goals & Results, Developing Alternatives, Evaluating Progress	4
15	Organization- Meaning, Legal Structure, Sole Proprietorship, Creating a sole Proprietorship, Advantages & Disadvantages Partnership- Creating Partnership, Characteristics of Partnership Corporation- Creating Corporation, Characteristics of Corporation, Limited, Liability, Continuity of Operation, Tax Aspects, Estate Planning	4
16	Organization Structure – Responsibility, Authority, Accountability Directing : Meaning, Objective of Directing, Personnel Management, Finding OR Recruiting People, Selecting the Right Person, Job Orientation, Compensation & Fringe Benefits, Evaluating performance, Training & Development, Promotion & Advancement, Terminations & dismissal	5
17	Motivation : Meaning, Different ideas for Managing & Motivating People, Mallow’s Need Hierarchy, Motivators & Hygienic Factors	3
18	Controlling : Meaning and Concept, Ordering : Meaning and Concept Leading : Meaning and Concept, Supervision : Meaning and Concept Communication : Meaning and Concept	2
19 & 20	Capital Management and Financial Management Definition of capital, Types of capital, Assess capital, Shares, Debentures, Ploughing back of earnings, Managing agent, Public deposit, Hire purchase, Leasing, Trade credit Importance of Capital and Financial Management Balance Sheet- Meaning, Concept, Importance, Precautions in preparing the balance sheet of business farm Study of different test Ratios- Current Ratio, Intermediate Ratio, Net Capital Ratio, Current Liability Ratio, Debt Equity Ratio, Equity Value Ratio	6
21	Profit & Loss Statement- Meaning, Concepts, Hypothetical Form of Profit & Loss Statement, Study of different Financial Test Ratio- Capital turnover Ratio, Rate of return on investment, Net Farm Income, Net return to total capital	4
22 & 23	Marketing Management: Meaning of Marketing, Definition of Marketing, Concepts of Marketing- Exchange concept, Product Concept, Marketing Myopia, Sales Concept, Difference between Marketing and Selling, Features of Marketing Concept- Consumer Orientation, Integrated Management Action, Consumer Satisfaction. Realizing the organizations goals including profit	7

Lecture	Details of Topic	Weightage
24	Marketing Mix : Meaning, 4 Ps of Marketing, Product Variable, Place Variable, Price Variable, Promotion Variables. Marketing Strategies. Consumer behaviour analysis	4
25 & 26	Market Segmentation - Meaning and concept of Market Segmentation, Importance Role of Market Segmentation, Methods of Market. Product Life Cycle : Meaning, Stages of Product Life Cycle, Market Pioneering stage, Market growth stage, Market Maturity stage, Market decline stage. Sales and Distribution Management : Meaning, Management of Sales and Distributions, Price Policy - Meaning of Price Policy, Objectives of Price Policy, Pricing Methods, Prices at various stages of Marketing	7
27 & 28	Project : Meaning of Project, Definition of Project, Concept of Project, Types of Agricultural Projects- Water Resource Development Projects, Agricultural Credit Projects, Agricultural Development Projects, Agro-Industries & commercial Development Project. Phases in Project Cycle :Conception OR Identification, Formulation OR Preparation of the Project, Appraisal OR Analysis, Implementation, Monitoring, Evaluation, Criteria for selection of Agricultural Projects	7
29 & 30	Methods of Project Appraisal: Undiscounted Measures-Payback Period, Proceeds per Rupee of Outlay, Average, Annual Proceeds of Rupee Outlay. Discounted Measures- Net Present worth (NPW), Benefit Cost Ratio (B:C Ratio), Internal rate of Return (IRR), Profitability Index, Appropriate Selection of Choice Indicator. Sensitivity Analysis	6
31 & 32	Guide lines for project preparation report- Summary & Conclusion, Introduction, Back ground, Project Rationale, Project Area, The Project, Organization & management, Production, Markets & Financial results, Benefits & Justification. Outstanding Issues Preparation of Project reports for various Activities in agriculture & allied sectors : Dairying, Poultry, Fisheries, Agro-Industries, etc.	4
	Total	100

b) Practical

Exercise	Title of Exercise
1.	Study of Input Market : Seed Fertilizer, Pesticides
2.	Study of Output market : Grain, Fruits, Vegetable, Flower
3.	Study of Product Market : Retail trade commodity trading, value added products
4.	Study of Financing Institutions, Co-operatives, Commercial Banks
5.	Study of Regional Rural Bank
6.	Study of Agribusiness Finance Limited
7.	Study of NABARD
8.	Study of Financial Criteria for appraisal of the Project

Exercise	Title of Exercise
9.	Appraisal of Irrigation Project
10.	Study of Financial Test Ratios for Evaluation Agro based Industries
11.	Study of Methods of Project Evaluation
12.	Case study of Agro based Industries
13.	Visit to Financial Institution
14.	Study on E-Commerce of Agricultural Commodities
15.	Visit to Export Market of Fruits/Vegetables/Flowers/Grains
16.	Visit to Processed Industries/Malls/Producer's Companies

Suggested Readings:

- 1) Agribusiness Management by Dr. ShivajiNagpure & Dr. R.G. Deshmukh, M/s. AGROMET Publishers, Nagpur.
- 2) Indian Agriculture & Agri-Business Management by Dr. SmitaDiwase, M/s. Scientific Publishers, Jodhpur, Rajasthan.
- 3) Agricultural Finance & Management by S. Subha Reddy, & P. Raghu Ram, M/s. Oxford IBH Publishing Co. Pvt. Ltd., New Delhi.
- 4) Agri Business Management by Dr. J.S. Amarnath & Dr. A.P.V. Samvel, M/s. Satish Serial Publishing House, Delhi-110033.
- 5) The Agribusiness Book by MukeshPandey, DeepaliTewari, M/s. ibdc Publishers, Lukhnow (U.P.), Pin-226 001.
- 6) Economics analysis of Agricultural Projects by J. Price Gittinger, M/s. The Economics Development Institute/World Bank, Washington D.C.-20433, U.S.A.

Course :	ECON 365		Credit:	2(1+1)	Semester-VI
Course title:	Farm Management, Production and Resource Economics				

Syllabus

Theory

Meaning and concept of farm management, objectives and relationship with other sciences. Meaning and definition of farms, its types and characteristics, factor determining types and size of farms. Principles of farm management: concept of production function and its type, use of production function in decision-making on a farm, factor-product, factor-factor and product-product relationship, law of equi-marginal/or principles of opportunity cost and law of comparative advantage.

Meaning and concept of cost, types of costs and their interrelationship, importance of cost in managing farm business and estimation of gross farm income, net farm income, family labor income and farm business income.

Farm business analysis: meaning and concept of farm income and profitability, technical and economic efficiency measures in crop and livestock enterprises. Importance of farm records and accounts in managing a farm, various types of farm records needed to maintain on farm, farm inventory, balance sheet, profit and loss accounts. Meaning and importance of farm planning and budgeting, partial and complete budgeting, steps in farm planning and budgeting-linear programming, appraisal of farm resources, selection of crops and livestock's enterprises.

Concept of risk and uncertainty occurs in agriculture production, nature and sources of risks and its management strategies, Crop/livestock/machinery insurance – weather based crop insurance, features, determinants of compensation.

Concepts of resource economics, differences between NRE and agricultural economics, unique properties of natural resources. Positive and negative externalities in agriculture, Inefficiency and welfare loss, solutions, Important issues in economics and management of common property resources of land, water, pasture and forest resources etc.

Practical

Preparation of farm layout. Determination of cost of fencing of a farm. Computation of depreciation cost of farm assets. Application of equi-marginal returns/opportunity cost principle in allocation of farm resources. Determination of most profitable level of inputs use in a farm production process. Determination of least cost combination of inputs. Selection of most profitable enterprise combination. Application of cost principles including CACP concepts in the estimation of cost of crop and livestock enterprises. Preparation of farm plan and budget, farm records and accounts and profit & loss accounts. Collection and analysis of data on various resources in India.

Teaching Schedule

a) Theory

Lecture	Topic	Weightages
1	Farm Management – Meaning – Definitions – Scope – Objectives - Relationship with other sciences	2
2	Farm – Meaning – Definition – its types and characteristics – factors determining size of farms	2
3	Economic principles applied to farm management – Principle of variable proportions – Determination of optimum input and optimum output	4
4	Minimum loss principle (Cost Principle) - Principle of factor substitution	3
5	Principle of product substitution - Law of Equi-marginal returns – Opportunity cost principle	3
6	Principle of comparative advantage – Time comparison principle	4
7	Types of farming – Specialization, Diversification, Mixed farming, Dry farming and Ranching – factors influencing types of farming	4
8	Types of farm business organizations – Peasant farming, Co- operative farming, Capitalistic farming, Collective farming and State farming	3
9	Meaning and concept of cost –types of costs – cost concepts – farm income measures – Gross income, farm business income, family labour income, net farm income & farm investment income	4
10	Farm business analysis – meaning and concept of farm income and profitability – technical and economic efficiency measures	4
11	Farm records and accounts – importance – types of farm records needed to maintain on farm	3
12	Farm inventory – methods of valuation– net selling price, cost less depreciation, market price, cost method, replacement cost less depreciation and income capitalization methods	5
13	Balance sheet or Networth statement – Assets, liabilities and networth – ratio measures	3
14	Income statement or profit and loss statement – Receipts, expenses and net income – ratio measures	4
15	Income statement or profit and loss statement – Receipts, expenses and net income – ratio measures	3
16	Farm planning – Meaning – Need for farm planning – types of farm plans – simple farm plan and whole farm plan – Characteristics of a good farm plan – basic steps in farm planning	4
17	Farm budgeting – Meaning – types of farm budgets – Enterprise budgeting – Partial budgeting and whole farm budgeting.	3

Lecture	Topic	Weightages
18	Linear programming – Meaning – Assumptions – Advantages and limitations	4
19	Risk and uncertainty in agriculture – nature and sources of risks – Production and technical risks – Price or marketing risk – Financial risk – methods of reducing risk	3
20	Agricultural Production Economics – Definition – Nature – Scope and subject matter of Agricultural Production Economics – Objectives of Production Economics – Basic Production Problems	4
21	Law of returns - Law of increasing returns – Law of constant returns – Law of decreasing returns	3
22	Factor-product relationship – production function and its types – Elasticity of production - Three stages of production function	3
23	Factor-factor relationship – Isoquant and their characteristics – MRTS – Types of factor substitution	2
24	Iso-cost lines – Characteristics – Methods of determining Least-cost Combination of resources – Expansion path – Isoclines – Ridge lines	4
25	Product-product relationship – Production possibility curve – Marginal rate of product substitution – Types of enterprise relationships – Joint products – Complementary – Supplementary – Competitive and Antagonistic products	3
26	Iso-revenue line and characteristics – Methods of determining optimum combination of products – Expansion path – Ridge lines	2
27	Resource productivity – Returns to scale	2
28	Resource economics – Definition, subject matter and scope - Differences between NRE and agricultural economics	3
29	Natural resources classification and characteristics – Resource depletion and causes for the same	2
30	Positive and negative externalities in agriculture	2
31	Inefficiency and welfare loss, solutions	2
32	Important issues in economics and management of common property resources of land, water, pasture and forest resources, etc.	3
	Total	100

b) Practical

Exercise	Topic
1	Basic concepts and terms
2	Determination of optimum input and output, and least cost combination of inputs
3	Determination of profitable combination of products and application of principle of equi-marginal returns
4	Seven types of costs and their computation
5	Farm cost concepts and their imputation procedure
6	Depreciation methods
7	Farm holding survey
8	Livestock – Farm survey
9	Estimation of cost of cultivation and farm income measures of major crops
10	Farm inventory analysis
11	Farm financial analysis – Preparation and analysis of balance sheet
12	Preparation and analysis of profit and loss statement
13	Preparation of farm plans
14	Preparation of enterprise budget and partial budget
15	Study of farm management aspects related to Agriculture college farm
16	Final Practical Examination

Suggested Readings:

- 1) Economics of Agricultural Production and Resource Use: Heady, Earl O, Prentice Hall of India, Private Limited, New Delhi, 1964
- 2) Introduction to Agricultural Economic Analysis: BISHOP, C.E., & TOUSSAINT, W.D., NEWYORK, John Wiley and Sons, Inc., London, 1958
- 3) Fundamentals of Farm Business Management: S.S. Johl, J.R. Kapur, Kalyani Publishers, New Delhi
- 4) Agricultural Economics: Subba Reddy S., Raghuram P., NeelakantaSastry T.V., Bhavani Devi I., Oxford and IBH Publishing Company, Private Limited, New Delhi, 2006
- 5) Farm Management Economics: Heady Earl O and Herald R. Jenson, Prentice Hall, New Delhi, 1954
- 6) Elements of Farm Management Economics: I.J. Singh, Affiliated East-West press, Private Limited, New Delhi
- 7) Introduction to Farm Management: Sankhayan, P.L., Tata – McGraw – Hill Publishing Company Limited, New Delhi, 1983
- 8) Resource Economics: A. Randall Wiley, Oxford India Publication

- 9) Environmental Economics: R. N. Bhattacharya, Oxford India Publication
- 10) Hand Book of Environmental Economics: K. Chopra and VikramDayal, Oxfor India Publication
- 11) Resource Economics: Conrad, Jon M, Cambridge University Press
- 12) Environmental economics: PrakashVohra, Commonwealth Publishers
- 13) Natural Resource Economics: Theory and Applications in India: Kerr, John M, Marothia D.K., Katar Singh, Ramasamy C & Bentley W.R., Oxford & IBH Publishing Company, Private Limited, New Delhi, 1997
- 14) Environmental Economics: Sankar U, Oxford University Press, 2001
- 15) Environmental and Natural Resource Economics: Tietenberg T. 6th Ed. Addison Wesley 2003