

School of Management Studies

**P.G. Department of Management,
North Maharashtra University, Jalgaon**

Syllabus
Agri-Business Management
(Under Academic Flexibility)



(With Effect from June 2012)

Faculty of Commerce and Management

2012-13



Department of Management Studies,

North Maharashtra University, Jalgaon

(Grade 'B' (2.88) NAAC Re-Accredited)

FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 304G Agri-Business Management

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

1) Introduction to ABM

- Meaning, definition, history, Importance and scope of agri-business
- Changing dimension of agricultural business
- Agri-business Management-distinctive features, nature and components
- Five Years Plans and agri-business, characteristics of current five year plan with respect to agri-business

2) Farm Management

- Organization and operation of farm business
- Tools of farm business organization and operation
- Steps in farm business organization
- Evaluation of available resources in Farming & its optimum Utilization
- Appraisal and goals of farm business
- Approach to reorganization of the farm business
- Farm adjustment program under uncertainty
- Constraints of agri-business infrastructure (technological, social & cultural) Analysis of farm records, Farm inventories

3) Agro-Processing Management

- Role of agro-processing industries in the Indian economy
- Status and potential of Indian agro-processing industries.-- Food grains, commercial crops
- Policy environment of agro-processing industries-Development, Management structure and Communication.
- Work performance efficiency, public contact and public participation in agro-processing industries
- Government policies relating to agro processing unit
- Interdependence of agro-processing industries
- Problem of agro-processing units
- Guideline for financing of agro-processing industries in India

4) HRM In Agri Business Management

- Development of Human Resource through Agricultural Training
- Importance of Human Resource in Agricultural
- H. R. M. development program for Agribusiness

5) Emerging Trends In ABM

- Agro Tourism
- Organic Farming
- Contract Farming
- Herbal Farming

Reference Books:

- Dhondyal, S.P. Farm Management: An Economics Analysis. Friends Publications, 90, Krishnapur, Meerut - 250002
- Johl, S.S. and T.R. Kapur. Fundamentals of Farm Business Management. Kalyani Publishers, 11 Rajendra Nagar, Ludhiana – 114008,P-475
- Kahlon, A.S. and Karan Singh. Economics and Farm Management in India: Theory and Practice. Allied Publishers Pvt. Ltd. 15 JN Heredia Marg, Ballard Estate Mumbai-400038

4. Singh I.J. Elements of Farm Management Economics. Affiliated East West Press, Pvt. Ltd. New Delhi.
5. Srivastava, U.K. Vathsala. Agro-processing Strategy for Acceleration and Exports Oxford University Press, YMCA, Library Building, Jai Singh Road, New Delhi – 110001.
6. Rajagopal. Organizing Rural Business Policy Planning and Management. Sage Publication, New Delhi.
7. Pandey, Mukesh and Deepak Tiwari. Rural and Agricultural Marketing International Book Distribution Co. New Delhi.
8. Diwase, Smita. Agri-Business Management. Everest Publishing House, Everest Lane, 536, Shaniwar Peth, Appa Balwant Chowk, Pune – 4110030
9. Siva Rama, K., K. Ramesh and M. Gangadhar. Human Resource Management in AGRICULTURE. Discovery Publication, New Delhi.
10. Talwar, Prakash, Travel and Tourism Management, Gyan Books Pvt. Ltd., Main Ansari Road, Darya Ganj, New Delhi- 110 002
11. Bagri, S.C. Trends in Tourism Promotion 2003. International Books Distributors, 9/3, Rajpur Road, Dehradun-248 001 Uttarakhand (India)



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(Grade 'B' (2.88) NAAC Re-Accredited)

FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 305G Management of Agriculture & Allied Sciences

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

1) Live Stock Production and Management

- a. Scope of livestock in Indian economy
- b. Livestock census and trends in livestock production
- c. Terminology used in livestock care-poultry calf, heifer, milking animal, dry animal, pregnant animal, draft animal and breeding bull
- d. Stress management in livestock Housing
- e. Nutrient requirement of livestock and poultry
- f. Maintenance of records of livestock dairy and poultry farms
- g. Animal health insurance cover, structure of udder and letting down of milk, clean and hygienic milk production

2) Value Addition in Animal Products

- a. Present status of dairy, poultry, meat, wool and hide industries in WTO regime.
- b. Milk composition of different species
- c. Production, packing, marketing of milk, meat and their products
- d. Import, export of animal and poultry products
- e. Price regulation in animal products. Factors influencing pricing
- f. Trends in marketing and utilization of animal products
- g. Importance of hides and bones, quality standards and storage of hides & bones
- h. Market standards and regulation of animal products

3) Post – Harvest Technology of Horticultural Crops

- a. Importance and present status of post harvest technology in horticultural crops in India. Maturity, harvesting and handling in relation to extended shelf-life and storage quality of fruits, vegetables and flowers
- b. Maturity and harvesting indices of fruits, vegetables and flowers
- c. Factors responsible for maturity, ripening and deterioration of horticultural produce
- d. Methods of pre-cooling, grading, packaging, storage and transport of fruits, vegetables and flowers
- e. Importance and scope of fruits and vegetable preservation
- f. Selection of site for fruit and vegetable preservation unit. Principles and methods of preservation
- g. Preparation of jams, jellies, marmalades, squashes, juices, syrups, preserves, crystallized fruits, chutney, pickle and ketchups
- h. Spoilage of processed products, Post harvest management of cut flowers. Control of post harvest diseases of important fruits and vegetables

4) Bio-fertilizers and Mushroom Production

- a. Bio-fertilizers: Introduction, importance and definition
- b. Type of bio-fertilizers, Economics of bio-fertilizer production
- c. Mushroom: Introduction, importance and types of mushrooms. Requirements for mushrooms cultivation: different tools, equipments, substrates and chemicals required for commercial cultivation of mushroom

5) Information Technology in Agri-Business

- a. Information Technology: meaning, role and importance in Agri business and Agriculture marketing
- b. Importance of Common Service Centers (CSC), Common issues of CSCs, Expert decision support system in Agriculture

- c. Information Technology for Agricultural Marketing
- d. Online market information, online market status in India
- e. Website on Agriculture marketing and exports
- f. Role of private companies in online marketing – eChaupal, HLL Shakti

Reference Books:

1. Banerjee, G.C. Text Book of Animal Husbandry. Oxford and IBM Publishers, New Delhi.
2. Sashry, N.S.R.C.K. Thomas and R.A. Singh. Farm Animal Management and Poultry Production. NSR, Vikas Publishing House Pvt. Ltd. Delhi.
3. Hand Book of Animal Husbandry, ICAR, New Delhi.
4. Panda, B. and etal. Feeding Poultry. ICAR, Publication, New Delhi
5. Singh, R.A. Poultry Production. Publishers, New Delhi.
6. Maske, O Norton. Commercial Chicken Production. Manuel AVI Publishers, INC West Port.
7. Ling. E.R. Text Book and Dairy Chemistry. Chapman Hall Ltd., London
8. Devendra, C and G. B.McElroy. Goat and Sheep Production in Tropics-Long man Group Ltd., London.
9. Pantastico, E.R.,B. Post Harvest Technology, Handling, Utilization of Tropical and Sub-tropical Fruits and Vegetables. The AVI Publishing Co., West-Post, Connecticut, USA.
10. Salunke, D.K. and Desai, B.B.Past Harvest Biotechnology of Vegetables. II CRC Press, Boca Raton, Florida.
11. Varma, L.R. and V.K.Joshi. Post Harvest Technology of Fruits and Vegetables, Vol. II. Indus Publishing Company, New Delhi-110027
12. Dixon, R.O.D. and C.T. Wheeler, Nitrogen Fixation in plants. Blackie USA, Chapman and Hall, New York.
13. Motsara I.M.R., P. Bhattacharyya and Beena Srivastava, Biofertilizer Technology, Marketing and Usage- A source Book – cum glossary, FDCO, New Delhi.
14. Bahl, N. Handbook on Mushrooms. Oxford and IBH Pub. Co.Pvt, Ltd, New Delhi.
15. Kapoor, J.N. Mushroom Cultivation. Sterling Pub. Co., New Delhi-16.
16. Paul McConnell. Measuring the impact of information on development. IDRC, 1995
17. Recciuti, M.Database vendors hawk wares on Internet. Info World, 17-2, Jan 9,10.
18. Melone, T, Yates, J and Benjamin, R. Electronic Markets and Hiersrchies. CACM 485.
19. Shah Jignesh. Commodity Future- Benefits start flowing in The Hindu Survey of Indian Industry.



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(Grade 'B' (2.88) NAAC Re-Accredited)

FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 306G Agricultural Economics

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

Introduction to Agricultural Economics

- a. Meaning, concepts, definitions scope and importance of Agricultural
- b. Land: Concept Land use classification, Land ownership and distribution of land, Management of Land
- c. Agricultural labour and capital
- d. Farm Mechanization and its scope and effects on Agriculture

Structure & Dynamics of Indian Agricultural

- a. Place of agricultural in National economy
- b. Special characteristics of agriculture in Indian economy
- c. Pattern of agricultural holdings
- d. Agricultural productivity: Trends, causes and consequences of low productivity in India
- e. Green revolution: Strategy in development of Indian agriculture

Indian Agricultural Policy & Reforms

- a. Meaning, types and importance
- b. Evolution of agricultural policy
- c. Famine Commission Report
- d. Royal Commission on Agriculture: Recommendations
- e. Drought Prone Area Programme (DPAP)
- f. Land Reform Policy
- g. National Insurance Policy
- h. Nature and objectives of land reforms
- i. Tenancy reforms, Crash Scheme for Rural Development
- j. Major agricultural input policies including seed, fertilizer, pesticides, credit and irrigation
- k. National Rural Employment Assurance Programme & other recent Agricultural Development Programs
- l. Current Agricultural Export Policies for different commodities, Role of APEDA

Financial Management in Agri-Business

- a. Nature and scope, importance of agricultural finance
- b. Agricultural finance as a part of public finance
- c. Source of capital: Meaning and concept of agricultural credit
- d. Classification and forms of credit, 3 R's, 5C's and 5 P's of credit
- e. Credit creation and credit control
- f. Credit rationing and planning
- g. Supervised credit, Credit demand and supply
- h. Credit institutions, credit policy and required reforms
- i. Role of NABARD & Other agricultural credit societies

Reference Books:

1. Agrawal, A.N. - Indian Agriculture: Problems, Progress and Prospects. Vikas Publishing House Pvt. Ltd., Delhi.
2. Mamoria, C.B. - Agricultural Problems of India.- Kitab Mahal, Allahabad
3. Owen Oliver, - Natural Resources Conservation and Ecological Approach.- MacMillan Co.866, Third Avenue, New York-10022.
4. Mamoria, C.B. - Agricultural Problems of India.- Kitab Mahal, Allahabad.
5. Bansil, P.C. - Agricultural Problems of India- Vikas Publishing House Pvt. Ltd., Delhi.
6. Jain, S.C. - Agricultural Policy in India.- Allied Publishers Pvt.Ltd. Mumbai, Kolkatta, New Delhi.
7. James P.G.- Agricultural Policy in wealthy Countries.- Ague and Robertson Publishers, Sydeny.
8. Karla, O.P.- Agricultural Policy in India.- Bombay Popular Prakashan, Mumbai.
9. Datta, K.K. and K.P.M. Sundaram. - Indian Economy.- Latest Edition, S. Chand and Co., Ltd., 7361, Ram Nagar, Qutab Road, New Delhi-110055.
10. Banerjee, G.C.- Text Book of Animal Husbandry.- Oxford and IBH Publishers, New Delhi.
11. Mahanta, K.C. - Animal Husbandry in India.
12. Patnkar, S.V.- Financial Management.- Everest Publishing House Everest, Parshuram Apartment, 12, Sankalp Society, Paud Phata Road, Opp. Jog Hospital, Pune-411038
13. Jain, S.C. - Management in Agricultural Finance.- Vora and Company. Publishers Pvt. Ltd.
14. Prasanna Chandra. - Financial Management. - Tata Mcgraw Hill Publishing Co. Ltd., New Delhi.
15. Kahlon, A.S and Karam Singh. - Managing Agricultural Finance: Theory and Practice. - Allied Publisher Pvt. Lt.,165 , J.N. Heredia Marg, Ballard Estate, Mumbai-400 038.



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FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 307G Agricultural Marketing

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

1) Introduction to Agricultural Marketing

- a. Scope, concepts & objectives
- b. Differences in Agricultural & consumer Marketing
- c. Constraints in Agricultural marketing
- d. Problems of Agri. Marketing : Traditional agro marketing and present status, suggestion for improvements
- e. Present status & problem in various marketing functions
- f. Role of APMC in agricultural marketing

2) Problems of Agricultural Marketing

- a. Defects in traditional agri. marketing system and suggestions for improvement
- b. Standardization: Standards and standardization, aims of standardization, significance of standardization, demerits of standardization. Basis of standards, AGMARK
- c. Grading: A marketing function, Importance of grading in agriculture grading in India
- d. Channels of Marketing: Meaning, definition, marketing costs, margin, price spread, factors affecting the cost of marketing, reasons for higher marketing costs of farm commodities, ways of reducing marketing cost
- e. Study of Market Intelligence and Market Integration : Meaning, definition, types of market integration, market function, price trends, market information. Co-operative agricultural marketing and public agencies involved in agricultural marketing viz. FCI, NAFED, STC, etc. Functions of price mechanism, interrelationship between prices of inputs and output. Nature and supply of agricultural products, marketable and marketed surplus. Types and reasons for price movements and their effect on agricultural price stabilization and price support policies.
- f. Role of MCX, NCDEX in agricultural commodities
- g. Warehousing: State and Central Warehousing Corporations, objectives, functions, advantages, speculation, future trading and hedging
- h. Hedging: Meaning, chief features of hedging, kinds, purpose, benefits and limitations of Hedging
- i. Future Trading: Characteristics of future trading, organized trade in futures

3) Retail Marketing

- a. Concept, types of retailers, supermarkets, factory outlets, hypermarkets
- b. Non store retailing. Retailer- marketing decisions. Direct selling, one to one selling, multiple selling, direct marketing and multiple marketing
- c. Major types of retail organization, co-operative chain stores, voluntary chain, retailers and consumer cooperatives
- d. Retail Chain Management by Corporate Houses
- e. Procurement decision, Price, promotion and place decision f. Packaging and Market Segmentation in Retail Marketing
- g. Store Management: Retail location, merchandising, using price to stimulate market sale h. Branding Strategy: Manufacturer's brand, private label, brand for a sale
- i. Trends in retailing, retailing strategies
- j. Major agricultural produce retail institutions (viz.- Reliance Fresh, Hariyali)

4) Supply Chain Management / Sales & Distribution

- a. Understanding Supply Chain
- b. Decision phases in Supply Chain
- c. Drivers of Supply Chain performance
- d. The Role of Transportation in a Supply Chain, Factors affecting transportation Decisions, Tailored Transportation
- e. Managing Supply, Managing Demand in Supply Chain

5) Promotion of Agri Products

- a. Basic Concept of Promotion
- b. Fundamental of Advertising
- c. Market Analysis for Agri Products segmentation & Targeting
- d. Direct Marketing
- e. Sales Management, Personal Selling & Salesmanship
- f. Sales Related Marketing Policies
- 6) Trading of Agricultural Marketing**
 - a. Importance of agricultural commodities in agricultural marketing
 - b. Marketing of Seeds, Fertilizers, Pesticides
 - c. Marketing of pulses- tur, gram, urid etc
 - d. Study on price spread of important crops and producer's share in consumer rupee
 - e. Marketing of mango, citrus and grapes
 - f. Marketing of vegetables
 - g. Improving efficiency in commodity marketing
 - h. Role of co-operative and regulated market in commodity marketing
 - i. Marketing of commercial crops with special reference to all functions and price analysis
 - j. Commercial commodity Trading- cotton, sugarcane, onion, grapes, banana, citrus, mango, cut flowers – roses, gerbera, gladiolus, etc. vegetables – cauliflower, cabbage, tomato, potato, onion, lady-finger, brinjal
 - k. Existing levels of processing for exports

Reference Books:

1. Acharya, S.S. and N.L. Agrawal. -Agricultural Marketing in India.- Oxford and IBM Publishing Company Pvt. Ltd., 66 Janpath, New Delhi-110001.
2. Gupta, A.P. - Marketing of Agricultural Produce in India. - Vora and Company Publishers Pvt, Ltd., 3, Round Building, Kalbadevi, Mumbai-400002
3. Mamoria C.B. and R.L. Joshi.- Principles and Practice of Marketing in India. -Kitab Mahal, 15, Thorn hill Road, Allahabad.
4. Philip Kotler.- Marketing Management.- Pearson Education Publishers, New Delhi.
5. Panvar, J.S.Beyond - Consumer Marketing. - Response Books, Sage Publications, New Delhi.
6. Pandey, Mukesh and Deepak Tiwari.- Rural and Agricultural Marketing.- International Book Distribution Co., New Delhi.
7. Swapna Pradhan.- Retail Management – Tata McGraw Hill
8. Acharya, S.S. and N.L. Agrawal. - Agricultural Marketing in India. - Oxford and IBH Publishing Company Pvt., Ltd., 66, Janpath, New Delhi 110001
9. Mamoria, C.B. and R.L. Joshi. - Principles and practice of Marketing in India. - Kitab Mahal,15, Thorn hill Road, Allahbad.
10. Sunil Chopra, Peter Meindl,- Supply Chain Management.- Prentice Hall Publication
11. Panvar, J.S. Beyond - Consumer Marketing. - Response Books Sage Publications, New Delhi.
12. S. A. Chunawala,-Advertising, Sales and Promotion Management- Himalaya Publishing House



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FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 404G Rural Development

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

1. Rural Development

- a. Nature & Scope of Rural Development
- b. Importance of Rural Development
- c. Objectives of Rural Development

2. Approaches to Rural Development

- a. Community Development Programme
- b. Intensive Agricultural District Programme
- c. Growth Center Strategy
- d. Concept of Integration
- e. Micro level planning

3. Special Schemes for Rural Development

- a. Stress on special schemes
- b. Limitations of special schemes
- c. Strengthening special schemes

4. Employment Generation Programs

- a. Crash scheme for Rural Development
- b. Pilot Intensive Rural Employment projects
- c. Antyodaya
- d. Employment Guarantee scheme
- e. Food for work programme
- f. National Rural Employment Generation Guarantee
- g. Rural Landless employment Guarantee programme
- h. JawaharRojgaryojana
- i. Jawahar Gram samridhiyojana

5. Role of Banking in Rural Development

- a. Growth of Cooperative Banking in Rural sector
- b. Role of Commercial Banks in Rural sector
- c. NABARD, its Schemes & Patterns

6. Integrated Rural Development Programme

- a. Salient features of IRDP
- b. Targets & Achievements of IRDP
- c. Major problems in IRDP
- d. Strengthening IRDP
- e. Swarnajayanti Gram Swarogaryojana (SHSY)

7. Rural Development Administration and Panchayati Raj Institution

- a. Functions of Panchayati Raj System
- b. Merits & demerits of Panchayati Raj System
- c. Strengthening the Panchayati Raj System
- d. Rural Development Administration

Reference Books:

1. Rural Development by – Dr. I. SatyaSundaram
2. Rural Development and Planning in India – Devendra Thakur, Deep & Deep Publications, New Delhi
3. Rural Industrilisation in India – Shrinivas Thakur – StrelingPublishess, New Delhi
4. Dynamics of Rural Development Powar Structure – S.N. Chandhary – Amar Prakashan, New Delhi.
5. Integrated Rural Development Programme in India : Policy & Administration – A.K. Shrivastva – Deep & Deep Publications, New Delhi.
6. Integrated Rural Development – R.C. Arora – S. Chand Sons, New Delhi.



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FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 405G Management of Agri-Business Projects

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

Introduction to Project Management

- a. Search for a Business Idea, Concepts of Project
- b. Project Identification, Project Formulation
- c. Project Analysis, Project Risk
- d. Project Planning, Project Design and Network Analysis
- e. Project Report, Project Appraisal
- f. Location of an Enterprise, Factory Design and Layout

Financial Analysis

- a. Financial Analysis, Funds flow analysis
- b. Ratio Analysis, Investment process
- c. Break Even Analysis, Profitability analysis
- d. Social Cost- Benefit Analysis, Budget and planning Process, Benchmarking
- e. Preparation of financial statements (P & L a/c, Balance Sheet)

Project Finance

- a. Source of Development of Finance, Project Financing
- b. Institutional Finance to Entrepreneurs, Financial Institutions, Working Capital Management, Incentives and Subsidies

Policies

- a. Policies Governing Entrepreneurship, Applicability of the Factories Act, Role of Consultancy Organisations
- b. Role of Various Government Institutions for Promoting Agricultural Projects

Project Reports & Cases

Preparation of Project Reports for-

- a. Dry Grains
- b. Fertilizer / Pesticides
- c. Live Stocks
- d. Floriculture & Horticulture
- e. Milk & Milk Products
- f. Medicinal Plants
- g. Agro Tourism
- h. Irrigation
- i. Extraction of Plants and Grains

Reference Books:

1. Project Management- Vasant Desai- Himalaya Publication
2. Jain, S.C. - Management in Agricultural Finance.- Vora and Company. Publishers Pvt. Ltd.
3. Karla O.P.- Agricultural Policy in India – Bombay Popular Prakashan Mumbai
4. Banerjee, G.C. – Text Book of Animal Husbandry – Oxford & IBH Publisher New Delhi.
5. Rajagopal- Organizing Rural Business Policy Planning and Management- Sage Publication, New Delhi.
6. Pandey, Mukesh and Deepak Tiwari-Rural and Agricultural Marketing -International Book Distribution Co. New Delhi.
7. Diwase- Smita. - Agri-Business Management- Everest Publishing House



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FACULTY OF COMMERCE & MANAGEMENT

New Syllabus: Second Year M.B.A. (W.E.F. June -2012)

Paper: 406G New Trends and Development in Agri-Sector

(75 + 25 Pattern: External Marks 75+Internal Marks 25 = Maximum Total Marks: 100)

Required Lectures: 45+15 hours

Agribusiness Management

Concept of E-agribusiness, Need & importance of E-agribusiness, Different models in E-agribusiness, Microfinance with special reference to SHGs.

Green house / Polyhouse techniques

Basic concept of Green house / Polyhouse, Constructing Green House / Polyhouse, Different commercially important horticultural and other plants grown in Green House / Polyhouse, Importance & future scope of the technique.

Plant Tissue culture

Basic concept, scope & importance of plant tissue culture, Fundamental technique followed in tissue culture, Major crop plants exploited in tissue culture technique.

Agro-tourism

Concept of agro tourism, Agro-tourism as a new potential business

Biodiesel sector

Basic concept of biodiesel, Different crop plants used in biodiesel, Benefits of biodiesel in comparison to crude diesel / petrol, Manufacturing biodiesel, Algal biodiesel.

Managerial aspects in Food Processing Industry.

Organization of a food processing unit: Different department involved in a food processing company and importance of coordination in those departments etc.

Importance of production, marketing & distribution aspects in food processing sector.

Management of Agro Processing Industry

Factors to be considered while establishing food processing plant including government norms & requirements, Actual processing of Agri-produce into final products, Utilization of byproducts in agro processing industry

Market study of processed food products

Introduction to different research institutions and corporations involved in food processing sector.

Water Management:

Sources of water and water requirement of crops, irrigation water use efficiency

Micro-irrigation systems, economic use of water

Water conservation measures, rain water harvesting, gully plugging, contour bunding , terracing, checking run-off water

Watershed development programmes, problems of water management, water pollution and strategies to overcome them

Reference Books

1. "Commercial Agri-enterprises-Strategy Achievement and Future prospects", S. N. Misra, Deep & Deep Publications, New Delhi.
2. Indian Agriculture & Agri-business management, Dr. Smita Diwse, Krishi Resource Management Network
3. B. Misra, G. C. Kar, S. N. Misra, 2004," Agro Industries and Economic Development, A vision of the 21st Century", Deep & Deep Publications Pvt. Ltd., New Delhi
4. Dairy Technology, By Sukumar De, Tata MC Graw Hills Publication, New Delhi
5. Food biotechnology, S N Tripathy, Dominant Publishers and Distributors, New Delhi
6. Water Resources by Ministry of Agriculture, Govt. of India
7. Principles of Soil Conservation and Water Management by H.R.Arakeri and Roy D.