

“CONCEPTUAL MODEL OF ENTREPRISE RESOURCE PLANNING FOR DAIRY COOPERATIVE: SELECTED MODULES”

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Abstract - The Dairy cooperative is one of the main cooperative in western Maharashtra. It helps to uplift the landless farmers. There are various challenges before dairy cooperative. To overcome these challenges Enterprise Resource Planning (ERP) Implementation is must. For any organization Man, Machine, Money and Material are important resources. It is necessary to manage these resources effectively. The ERP is important tool to manage these resources. The ERP will integrate information, track orders, analyze data, monitor process flow, ensure transparency, reduce personnel and increase productivity/profit. This paper explains conceptual model of Enterprise Resource Planning for dairy cooperative. The objective of study is to design conceptual model for Enterprise Resource Planning implementation. The study will consider only cooperative dairies in western Maharashtra i.e. Sangali, Kolhapur, Solapur, Satara and Pune districts as main dairy cooperatives spread in this area. Using this model it will help to develop and implement Enterprise Resource Planning system in dairy cooperative successfully. The study will consider only cooperative unions.

Key words: Enterprise Resource Planning, Conceptual, Model, Information Communication Technology.

I. INTRODUCTION

The cooperative played important role in development of Maharashtra. Especially in western Maharashtra i.e. Kolhapur, Sangali, Satara, Pune and Solapur districts cooperative is well developed. These cooperatives changed life style of rural peoples. Warana, Akhuj are some examples of ideal cooperative movement. Dairy cooperative is one of the sector in which millions of farmers are involved in this business. It is becoming main source of income for the farmers. It helps to poor families to fulfill their basic needs and routine expenses. Now day's cooperative facing many challenges. They have to compete with private and multinationals. Development of rural farmers depends upon progress of dairy cooperative. It is necessary to minimize bacterial count and time taken for milking to milk received at primary plant. Customer demands for more shelf life of milk and milk products.

Slowly technology has been used by dairies to provide value based services to their distributors and Milk suppliers. With the emergence of internet technology dairy can further consolidate and effectively manage their diversification portfolio of distribution service offering on the World Wide Web. The main goal of any organization is to maximize profits for its owners and cooperative milk union is not any exception. On line integrated systems offers a perfect opportunity for maximizing profit. The organization's profitability and productivity is mostly depending upon

planning of resources of organization as resources are limited.

Worldwide best practices should be implemented. In some cases it needs Business Process Re-engineering must be adopted. It is very important to manage these resources effectively. ERP – Enterprise Resources Planning is important tool to manage these resources. For any organization with multi location and multiproduct nature well placed ERP is very essential. ERP helps to integrate the data in organization under one common platform. ERP can cut down costs; improve the quality of working time and by and large. In organization Man, Machine, Money, Material and Management are important resources. It is observed that most of milk cooperatives failed to implement ERP. Hence researcher studies all aspects of ERP and provides better solution for implementing ERP in milk cooperatives. National dairy development board provides technical guidance to milk unions to implement ERP.

II. MAIN MODULES OF ERP FOR DAIRY COOPERATIVE

ERP is Enterprise Resource Planning is management tool for decision making, provides cross functional integration, employs proven business processes leads to better customer service, productivity and lowering of costs links customers and suppliers lays foundation for e-commerce. Total ERP is divided into 11 modules. The modules are designed based on functions and inter departments of dairy cooperative. The main modules of ERP are as follows –

1. Procurement
2. Procurement Services
3. Finance
4. Sales and Distribution
5. Materials Management and Purchase
6. Production
7. Production Services
8. Quality Control
9. Human Resource Management
10. Management & Administration
11. Systems

III. SUB MODULES AND TASKS

Each module of ERP is further divided into sub modules. Each module consists of tasks. In this paper modules not directly related production are considered. The details of sub modules and tasks as follows –

PROCUREMENT – Procurement is prime module of dairy cooperative. As milk is main raw material its collection and billing is considered in this module. This module consists of sub modules and tasks as follows -

Collection Centers

Collection Center Management
Collection Centre Facilities Maintenance
New Collection Centers

Procurement Logistics

Collection Centre storage/ Chilling systems
Milk Transportation
Milk Can Management
Procurement Cost Monitoring
Storage/Chilling Centre Operations
Bulk Storage Maintenance
Dairy Point Milk Collection Monitoring
Procurement Logistics Policies
Route Management

Bulk Procurement

Vendor Development
Bulk Supply Contracts
Bulk Milk Purchase Bills
Vendor Rating
Bulk Supply Contract Monitoring
Bulk Procurement Policies

Milk Procurement Accounting

Milk Collection Accounting
Third Party Point Milk Collection
Loan Recovery Advices
Milk Billing – Producers/Bulk
Milk Handling Charges Bills
Input/Service Charge Billing
Bill Payment Suspension
Rates and Charges
Final Additional Price Payment

Procurement Data Base

Liaison with NDDDB/ Mahasangh
Competitors' Data
Rates – Milk, Input Services

Department Administration

Budgeting
Staff Management
Office Administration
Review Meeting

PRODUCER SUPPORT – To get quality Milk dairy cooperative provides various services to milk producers via primary dairy cooperative. This module consists of sub modules and tasks as follows -

Support Services to Milk Producers

Membership Card Issue
Quality Awareness Training Programs
Presentation and Experts Services
Free Dairy Product Supply
Animal Data Base Maintenance
Milk Producer Services Policies

Assistance to Milk Producers

Incentive Schemes
Government Grants and Development Programs
Deposits, Loans and Advances

Loans Guarantees / Undertakings
Assistance Policies

Cattle Feed Sales

Cattle Feed Sales
Cattle Farm Issues
Green/Dry Fodder Management
Cattle Feed Sales Policies

Agriculture

Farm Maintenance
Green House
Garden Maintenance
Agro Produce Monitoring
Agri Technical Support

Veterinary Services

Veterinary Services on Request
Routine Check – up
Vet Camps/Vaccination Programs
Veterinary Center Management
Medicine Stocks Maintenance
Vet Services Policies
Vet Services
Vet Services Billing

Cow/Mother Bull Farm

Live Stock Maintenance
Farm Maintenance
Farm Maintenance
Seamen Stocks Maintenance
Cattle/Bull Farm Performance Monitoring
Veterinary Controls
Cattle Farm Policies

FINANCE – For any organization main objective is to make profit. Loss profit and financial reports will be derived in this module. It consists of following Sub Modules and tasks –

Accounts

Bill Passing
Account Finalization

Banking

Bank Account Operations
Bank Working Capital Loans
Bank Term Loans Management
New Loan Proposals

Finance Management

Working capital Management
Cash Management
Banking Database
Fund Sourcing

Fixed Asset Management

Cash Transactions
Cash Payments and Receipts
Petty Cash Management

Treasury

Exchange Management
Investments
Members Deposits

Costing and Budgeting

Costing
Budgeting
Budgetary Controls

Finance Department Budgeting

Tax Management

Direct Tax Management

Indirect Tax Management

Legal Compliances and Reporting

Others

Exports Documents and Accounting

Job Work Contract Billing

Audit Compliance

Finance Department Administration

SALES AND DISTRIBUTION – Profitability of dairy cooperative depends upon sales and distribution. The module has following sub modules and its tasks –

Local Sales

Liquid Milk Sale

Distributor Sales

Retails/Center Sale

Tender Based Sale

Invoicing

Deliveries

Local Market Development

Brand Development

Market Development Programs

Distribution Network

Product Development

Market Data Base

Dairy Cooperative Data Base

Sales Scheme Review

Local Sale Network

Delivery Monitoring

Collection Monitoring

Sales Representative Training

Sales Representative Work Monitoring

Distribution Network

Distributor Appointment

Service Level Management

Transport Logistics

Distribution Network Monitoring

Distributor Meets

Commission Computation

Promotional Expenses Reimbursement

Exports

Enquiry and Order Acceptance

LC Receipt

Export Documentation

Shipping

C & F Agencies

Export Market Development

Export Database

Export Promotion

Post Sales Follow up

Customer Services

Collection

Replacement

Sales Policy Review

Product Pricing

Payment Terms

Production Department Coordination

Distribution/Promotion Schemes

Distributor Policies

Sales Representative Allowances

Sales Programs Expenses

Marketing Department Administration

Staff Allocation

Letter Inward/Outward

PERSONNEL – Employees related all records and their benefits are considered in this module. It includes further sub modules and tasks as -

Appointments

New Appointment

Transfers

Resignation

Termination and Retirements

Attendance

Attendance Policies

Attendance Recording

Staff Leaves

Salaries

Salary Computation

Salary Certificates

Bonus Incentives

Perquisite Values, Taxation

Staff Advance

Request/Grant of Advance

Advance Recoveries

Advance Write offs

Interest Charging

Retirement Benefits

Gratuity

Salary Deduction/ Contribution

Group Benefits

Pension

Others

Staff Rating

Staff Replacement/ Stopgaps

Skills Availability Analysis

Employees Personnel Information

Personnel Development

Training Programs

Foreign Trainings

Education Courses

Job Allocation

Job Allocations

Job Shifting

Budgeting

Department Budgeting

Staff Requirement Estimation

Personnel Welfare

Staff Health Care

Recreation Facilities

Group Insurance

Labor Law Compliance, Reporting

Deduction/ Contribution Payments

Deduction Certificates

Reports

Personnel Department Administration

MANAGEMENT – To manage all activities management should efficient. These modules to manage management

functions. Management can take decision based on information generated. It consists of sub modules and tasks.

Budgeting

Budget Finalization
Variance Analysis Review
Budget Review and Revisions
Budget Parameters Review
Business Plans Reviews

New Proposals

New Projects
Funding Requirement Analysis
Major Contracts

Investments

Investment Decisions
Investments Performance Review

Policies Review

Staff Policies
Purchase Policies
Stocking Policies
Receivables Control
Sales Policies

MACS

System compliance Performance
Financial Management
Departmental Performance Analysis

Meetings

Committee Meetings
Board Meeting
Annual General Meeting

Corporate Governance

Governance Policy Review
Governance Performance Review
Audit Reports Review

Staff Matters

Promotions and Transfers
Systems Access Defining
Authorizations Review

Audits

Systems Audit
Internal Audit

ADMINISTRATION – Office administration is common activity for all departments. This module has sub modules and tasks as follows –

Office Administration

Office Vehicle Allocation
Office Equipment Maintenance
Library Management
Record Room
Guest House Management
Security Services

Reception Services

Communication Facilities
Inward - Outward Facilities
Document Management System

Public Relation Office

Government/ Institutional Liaison
Visitors PR/ Coordination
Group Coordination
News and Press Conference
Gifts and Sample
Members Complaints

Member Services

Member Welfare
Share Issue and Transfers

Legal

Court Cases
Legal Documentation
Legal and Drafting
Land Record
Laws, Rules and Notification Database

Secretarial Services

Committee Meetings
Board Meetings
Annual General Meeting
Office Orders

There are other production related modules which are not in the scope of this paper. Further each task is expanded with its subtask. This information will help to design develop ERP for dairy cooperative. Further actions and input forms and output reports can be design using this information

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