Emerging Changes in the Indian Dairy Industry

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Presentation Outline

- Context of the Study
- Overview of the Indian Dairy Sector
- Critical issues in development of Dairy Sector
- Comparative Analysis of Emerging Dairy Chain Models
  - Private Sector Model
  - Modern Co-operative under MACS Act
  - Traditional Co-operative
- Way Forward

Context of the Study

Context of the Study

- Indian Dairy Industry is at cross roads
- Industry strongly dominated by the government sector and working in co-operative mode is going to face keen competition from private sector
- Co-ops performed well in some states, but in many states, they are functioning as a parastatals, weak representative of farmer interest
- Currently co-op prices serve as a bench mark for pricing of dairy
- Weak co-ops competing with private sector may severely affect farmer interest
- Growth potential is tremendous, can the farmers benefit from this opportunity?

Context of the Study

Critical Questions

- *What is the implications of these changes on the farmers – potential threats and opportunities?*
- *Which models better serve the interest of the farmers?*
- *How can the co-operatives be strengthened to meet the emerging changes?*

Overview of the Indian Dairy Sector

Overview of the Indian Dairy Sector

Production and Productivity

- Largest milk producer in the world, 100 million MT
- Value of output Rs. 1179 billion (2004 -05) (Almost equals combined output of paddy and wheat!!)
- 1/5th of the world bovine population
- Milch animals (***45% indigenous cattle***, ***55 % buffaloes, and 10% cross bred cows)***
- Very low productivity, around 1000 kg/year(world average 2038 kg/year)
- Large no. of unproductive animals, low genetic potential, poor nutrition and lack of services key factors for low productivity
- Different regions – Developed, Average, Below average (eastern states of Orissa, Bihar and NE region)

Overview of the Indian Dairy Sector

Tremendous Growth through Operation Flood

- Stagnant milk production during 1950s and 60s
- Major changes in the dairy policy (Operation Flood)
- Linking-up rural producers with the urban consumers
- Large public investment in milk processing sector through cooperatives
- Growth rate of agriculture is stagnant, below 2%, livestock sector growth rate is more than 4.5%
- IMPACT ON RURAL NUTRITION, EMPLOYMENT, INCOME, WOMEN EMPOWERMENT

Overview of the Indian Dairy Sector

Dairy and Livelihoods (Pro-poor impact)

- Small and marginal farmers own ***33 %*** of land, and about ***60%*** of female cattle and buffaloes (pro-poor impact)
- 75 % of HH have 2-4 animals on average
- Dairying is a part of the farming system
- Feed is mostly residual from crops - cow dung used as manure
- Source of regular income, crop income is seasonal – risk minimization (suicides)
- Comprises about 1/3rd of the rural incomes
- Livestock is a security – asset to be sold in times of crisis
- KEY TO INCLUSIVE GROWTH

Overview of the Indian Dairy Sector

Marketing

- 15 % of marketable surplus goes through organized sector, rest traditional unorganized sector
- Organized sector until recently was only the co-operatives
- Replication of the AMUL model in the rest of the country, NDDB lead agency
- 3 Tier structure : Village society, district unions federated at state level (headed by IAS officer)
- Model adopted with some variations in different states
- Co-operatives have achieved limited success in many states

Overview of the Indian Dairy Sector

Regulatory Environment

- Dairy sector was de-licensed in 1991
- Milk and Milk Products Order 1992: some controls
  - Collection areas/milk sheds specified
  - Processing capacity fixed
- Revised MMPO in 2002: controls stand withdrawn
- Private sector investment in dairying has increased considerably
- Previously, co-operatives did not have any competition from the private sector
- To strengthen co-operatives (MACS Act,1995): reduce government interference in mgt.
- farmer freedom to govern the organization

Overview of the Indian Dairy Sector

Livestock Services

- Agriculture is a state policy in India
- Center cannot enforce policies, driven by the ideologies and interests of the state government.
- Department of Livestock is with the Ministry of Agriculture
- Department of livestock has a network of veterinarians providing livestock veterinary services
- Partial Cost recovery now initiated in several states
- Efforts to enhance coverage through paravets & CBAHW
- Feed distribution at subsidized rate through co-operatives

Overview of the Indian Dairy Sector

Future Potential

- Dairy demand is income elastic
- Increase in Income and increase in population- high growth rate for dairy
- High potential for enhancing farmer incomes from dairy enterprise
- In this situation it is important to assess the critical weaknesses in the dairy value chain.
- Identify approaches to enable farmers to capitalize on these opportunities

Critical Issues in Dairy Value Chain

Critical Issues - Input

Breeding/health/extension

- Large majority of indigenous cattle (45% indigenous cattle, 55 % buffaloes, and 10% cross bred cows)
- National Cattle and Buffalo Breeding Program
- Only small percent is covered by AI, rest is dependent on natural breeding; Performance of AI is not up to mark
- State veterinary departments, co-operatives, NGOs, private veterinarians, and paravets are the service providers.
- Regions with high producing dairy animals –good coverage
- Other areas still lack adequate coverage of services
- Extension: Lack of extension – poor feeding practices does not enable farmers to capitalize on potential

Critical Issues - Input

Feed

- Availability, quality and cost of feed is an issue.
- Land is largely rain-fed or dry land (70%), low output of dry fodder
- Availability of land for fodder grass
- Subsidized feed is available through co-ops, but quality and affordability are issues

Credit

- Poor access to institutional credit
- Credit through informal channel has very high loan rate, and results in exploitation of farmer through lower milk prices

Critical Issues - Production

- Dairying is a part of the farming system, not dairy as enterprise
- Two to four animals on average, milk production is scattered through out the country
- Low productivity, large no. of unproductive animals poor genetic resources, low affordability of feed as well as poor feeding practices
- Farmer has low interest in dairying at times when crops are good
- Many areas do not have access to health and breeding services

Critical Issues - Marketing

- Two major channels – Co-operative, traditional
- Milk prices are set by the co-operatives
- Premium on fat content hence buffalo milk fetches higher price, cow milk pricing based on total solids
- Farmer price is Rs. 11 for cow milk and Rs. 14 for buffalo milk (0.25 USD & 0.35 USD) (1 liter bottle of water costs Rs. 12)
- The trader usually pays a small amount higher than the co-operative price (co-op price is the benchmark)
- In a large part of the country, there are no testing facilities at the village level, transparency in pricing
- Quality of milk, amount of time taken for milk to reach to bulk cooling/chilling center

Critical Issues – Competitive Environment

- In recent years, private sector competing with co-ops
- Need to strengthen co-operatives to compete with the private sector
- Regulatory changes in the co-operative sector – MACS/ "Producers company"
- MACS (Mutually Aided Co-operative Societies)
    - Two tier, village level and union level
    - No government control in administration
    - Democracy at the village and union level
    - Freedom in setting prices
    - Accountability and ownership at the village/union level
    - Strong governance and internal audit system
    - More freedom to village level societies (more than 1 soc/village)
    - So far implemented on the ground only in Andhra Pradesh

Comparative Analysis of three value chains in Dairy

- Andhra Pradesh state in South India is a leader in dairy activity and has experimented with various new models and has very active large private sector dairies competing with each other
    - ***Leading Private Sector Dairy***
    - ***MACS at a district level***
    - State Co-operative in a lagging state

Emerging Value Chains for Dairy

- Private Dairy in HQ in Andhra Pradesh
  - Initiated in 1992 after MMPO permitted private dairies
  - Traded on the stock exchange
  - Collecting milk about 7 lakh liters per day/ 1,50,000 HH/3500 villages
  - Leading well recognized brand, also have own supermarket stores
  - 3 Metros, Hyderabad, Bangalore, Chennai, and now enter Mumbai

Emerging Value Chains for Dairy

- Business model of Private Dairy
  - Has agents in the village for milk procurement (agent rel. with villagers)
  - No direct company involvement with farmers
  - The company has negotiated price with agent, but is not involved with what price the agent gives the farmers (slightly above co-op)
  - Farmer price at least state co-op price
  - Agent often times gives loans to farmers to maintain loyalty
  - Competing with other private players for procurement
  - Employees are previous dairy co-op employees
  - Collection areas depend on milk density and areas in which district co-op is less active

Emerging Value Chains for Dairy

- MACS Society in Andhra Pradesh
  - Dairy activities started in 1971 in the district
  - Changed to MACS society in 1998, (MACS Act, 1995)
  - Collecting milk from 650 villages in the district
  - Milk collection is 60,000 liters per day, likely to go up to 1,00,000 in the coming 2-3 years

Emerging Value Chains for Dairy

- Business Model of MACS
  - As per MACS norms, 2 tier operation, village level and district level
  - Village level managed by village society, district level by BOD
  - Elected members every year
  - The village level society itself is registered as a separate MACS society and has the freedom to use its own profits
  - MACS has the freedom to set own farmer prices, higher than co-op
  - District Union managed by professionals

Emerging Value Chains for Dairy

State Co-operative

- Is an apex level Dairy Cooperative Society registered under Cooperative Society Act – 1962
- Milk procurement from 12 district unions
- 3,22,000 liters per day/3800 village societies
- 2,24,000 farmers
- Not much competition with private sector in the area as YET

Emerging Value Chains for Dairy

- Business Model of Co-op
  - As per co-op norms, 3 tier operation, village level and district level, and state level
  - Village level managed by village society president
  - State level managed by bureaucrat
  - No democratic election at village level
  - Profits of village level society not distributed to farmers, no ownership
  - Prices set by co-op (low prices because of services and bonuses)

Comparative Analysis of the three models

Input Supply

- ***Private Dairy***
  - No provision for input supply except for loans given to farmers sometimes
- ***MACS Society***
  - Breeding and health services tie up with NGO/state dept.
  - Own manufacturing of quality feed at subsidized rate
  - Organized thrift and credit co-operative for credit for animal purchase
  - Medicines available at cost/Farmer meetings for extension
- ***State Co-operative***
  - Limited Breeding and health services
  - Feed available at subsidized rate through village society
  - Not much facility for loans
  - Medicines available at cost, availability is sometimes a problem

Comparative Analysis of the three models

- **Production**
  - At the farmer level, there is not much difference between the three models, because there is not much extension activities carried out by any of the three agencies
  - As an hypothesis one can say that the MACS society because of extension and availability of feed may be using higher feed as compared to crop residue which is not very nutritious
  - Need to look at the data closely to confirm this.

Comparative Analysis of the three models

Milk purchase from farmer

- ***Private Dairy***
  - Done through the agent (governance issue)
  - Agent decides what price he will give, usually competition with agents of other companies
  - Testing is done in very few cases, that is also not transparent
- ***MACS***
  - Done through Village MACS society (democratic functioning)
  - Prices declared by the Union, higher than Co-op pricing
  - Testing of milk through electronic milk-o-testers
- ***State Co-operative***
  - Done through village society (Society president has a lot of power)
  - Prices declared by co-op (lowest prices)
  - No testing, average prices for cow and buffalo milk, strong dominant people in community get better prices

Comparative Analysis of the three models

Primary Processing and Transportation

- ***Private Dairy***
  - Clean milk practices at village level
  - Efficient transportation
  - Good infrastructure for bulk coolers/Chillers
- ***MACS***
  - Clean milk practices at village level
  - Efficient transportation
  - Has developed a very good infrastructure for bulk/chillers (govt. subsidy on infrastructure NOT AVAILABLE TO MACS)
- ***Co-operative Dairy***
  - Limited attention to clean milk practices
  - Inefficient transportation
  - Has not availed of the government funds to develop this infrastructure

Comparative Analysis of the three models

Processing/Quality/Variety of Products

Private Dairy

- ISO certified plant meeting all quality requirements,
- Has a variety of quality products catering to children and younger generation (yoghurt, flavored milk)
- Selling mostly in metros, market expansion in urban areas

MACS

- Good quality products, but no certification as yet
- Traditional products
- Tapping the rural markets as well, through village societies (small packets, 250 ml)

Co-operative

- Quality of products is an issue, though has improved
- Traditional products
- Tapping only the urban market

Comparative Analysis of the three models

Future growth

- ***Private Dairy***
  - Not involved in dairy development activity, only procurement, will have to move to newer areas for expansion
  - In future if MACS becomes strong in these areas, procurement will be affected
- ***MACS***
  - Involvement in dairy development activity will help them to grow
  - Face competition from private sector because of community tie up
- ***Co-operative***
  - Low involvement of community will make it an easy target for private sector entry
  - Lack of variety and quality of products will make it difficult for them to compete with private sector

Way forward

- MACS Act was passed to make the co-operative strong in face of competition
- However, the act is most practiced only in AP, the other states have yet to implement this Act
- In AP itself, the previous government was supportive, but the new government is not supportive of MACS and has stopped further conversions of district unions to MACS
- However, in the past few years, about 650 MACS societies have registered in the state.
- A closer look at their functioning before taking this to other states

Way forward

- What should be the regulatory role of the government in times when private sector is becoming increasingly active?

- What are some options for enhancing availability of livestock services