



Institutional Support Required To Integrate Small Farmers For Livestock Commodity Value Chain-A Case Study

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Abstract

Recent reports reveal that in the globalised era farming will move towards meat and milk production from traditional rice and grain agriculture in line with the changing consumer tastes. The joint report by Food and Agriculture Organization in Rome and the Paris based organisation for Economic Cooperation and Development (OECD) of 34 leading world economies contained price and production forecasts to 2023 revealed that world meat production will have gone up by 58 million tones with developing countries making up 80 percent of increase. Report highlights that livestock production is projected to grow at higher rates than crop production. Moreover animal protein sources are easiest way through which protein malnutrition can be corrected easily. Since the commodity value of livestock products are high when compared to agriculture commodities in the coming years livestock products will the focus area for augmenting GDP in Agriculture sector. So institutional support are required for increasing production, productivity, food security, food safety, knowledge dissemination and services to achieve these objectives.

Background

Livestock sector plays an important role in rural livelihood, employment and income generation. Major livestock products like milk and milk products, meat and eggs contribute around one-sixth of the calories and one-third of the proteins in the per capita food supplies of the world; Per capita consumption of livestock products is four to five times higher in developed countries than in developing countries. India's 530 million livestock forms 12 % of the world livestock population. Per capita milk availability is 282 gms per day which is above ICMR recommendations. Poultry meat and egg production are moving at a faster rate. Per capita egg consumption is 54 eggs per annum.

Increase in cost of production reduces the profit margin. Animal husbandry is the second largest economic activity of rural India. In Arid and semi arid regions, livestock sector ranks first in earnings to skilled, semi skilled and unskilled populations. Animal husbandry is a growth engine and annual growth rate in dairying is 5 % and in poultry it is 10% and will alleviate rural poverty and uplift the rural

farmer. If the country has to sustain economically, livestock sector has to be strengthened. The availability of per capita animal protein is 10.8g whereas the requirement as per world average is 25g. National sample survey reports that 70-75% of their food budget is for milk and milk products. The need of the hour is increase in production, productivity and improvement in the marketing channel. In the case of failure in agriculture, livestock sector forms the source of income and gives insurance to any intervals of agriculture failure. With regard to production and consumption of milk, it is a golden era in the dairy sector. Organized sector grows more than 10% per annum. Milk production is increasing in Asia and India and increasing prices are favorable to developing countries. International Farm Comparison Network (IFCN), Germany reported that India has lowest cost of milk production when compared to developed countries.

Productivity and quality

According to recent reports 70% of Indian cows and 60% buffaloes have very low productivity. Average milk yield from

local cows is about 3 to 3.5liters, of buffalo 3.96 to 5.39liters and of cross bred cow between 5.82 to 7.80 liters per day which is significantly lower than the productivity in developed countries. According to the Economic Survey, productivity in agriculture sector is far below global standards; India has around 300 million numbers of cows and buffalos in dairy production and is the global leader in milk production: about 135 million tones a year. But productivity per cattle is comparatively less. The best run farms in the world produce 1.6 kg of milk for every kg of feed, in India it's less than a kg. Scientific breeding, feeding and management practices along with quality inputs and extension support services are required for achieving better productivity. There exists a wide deficit in the supply of feeds and fodders countrywide. Strategic programmes are required for reaching out among small holder population for facilitating technology transfer and extension support.

Demand-Supply mismatch

Among various livestock products, there exists a huge gap between production and consumption. While buffalo meat is the major item of Indian meat export, accounting for 59%, share of Indian meat in the world market is less than two per cent. Linking quality production of livestock products with lucrative incentives and popularization of traditional products technology can facilitate quantum jump in this industry. Since meat sector provides livelihood to 40 million people, most meats sold in the domestic market needs proper sanitary inspection by the veterinarians. This sector need total restructuring in tune with food safety and standards act 2006 to provide quality meat and meat products to the consumers. Divisibility, value addition and export of meat and meat products need to be strengthened for generating more employment as well as trade benefits. With improved domestic production and marketing efficiency, better access to expanding global market, India has the potential to become more competitive in the export of milk and milk products.

Indigenous milk products have great potential which are becoming more popular with the ethnic population spread all over the world. Indian dairy industry needs appropriate production, marketing, trade policy and its periodic revival to keep the pace with the rest of the world and remain competitive to grab opportunities through international trade.

In majority of livestock production enterprises emphasis was given to production aspects like Scientific breeding, feeding, management and disease control but the marketing of the livestock products were not given due attention. When the issue of sustainability in the production of livestock enterprise arises the marketing cannot be treated as a separate entity which is an integral component of the production activity. Livestock products, with the exception of around 18 % of the milk, produced are mainly marketed through unorganized sector which results in non-remunerative price to the producer and unreasonably cost to the consumer. In order to explore the rural market for livestock products, production strategy must be oriented towards marketing of the produce. It should be regulated with local, regional and international market while producing the commodity. Production of traditional livestock products, which fetches good price, should be promoted by exhibiting its inherent strengths and proper branding strategies. Changes in the extension approaches, market forecasting system, value addition, awareness on diseases affecting trade of livestock products, changes in the consumer behavior, production of livestock products based on the demographic characteristics of the population, good manufacturing and retail practices, best production practices and implementation of food safety norms, branding, etc need to be given more importance. One needs to redefine the role of marketing as creating, communicating and delivering value to the consumer. Hence addition of value to the livestock products should be based on consumer needs, taste and preferences like fat free milk for cardiac patients, chocolates for children, quality

cheese while considering for international market, etc.

Institutional support- A case study from Kerala Veterinary and Animal Sciences University

Taking into account the importance of market led production including online agriculture marketing and National Common Agriculture marketing, Kerala Veterinary and Animal Sciences University(KVASU) a State University based at Pookode, Wayanad in Kerala (www.kvasu.ac.in) identified key areas of institutional support required to integrate small farmers to a given agri commodity value. University is in the process of establishing appropriate projects related to services, marketing, food safety and knowledge dissemination to achieve the same.

Conceptual model for knowledge dissemination, SHG & Women empowerment

Recently more number of women self help groups are interested to undertake livestock production as one of their livelihood options. There exists a knowledge gap among women SHGs in the areas of scientific livestock rearing practices in scientific breeding, selection of animals, housing, feeding, management, disease control, value addition and marketing of milk and milk products. Interventions, which will help to fill the above knowledge gap is the need of the hour. As far as Women SHGs are concerned they are interested to adopt sustainable and affordable technologies that are available within their limits.

Farm publications, Television, Radio, Web media and newspapers play a key role in the transfer of appropriate technologies to livestock farmers. If properly utilized, they can also influence farmers in the adoption stage and will reduce the technological gap. Directorate of Entrepreneurship of Kerala Veterinary and Animal Sciences University developed a concept model for knowledge dissemination among livestock based women Self help groups to identify different

pathways for knowledge transfer, existing level of livestock information gained by the farmers, Level of knowledge required for sustainable results and Level of existing knowledge gap. Major extension agencies involved in knowledge dissemination among livestock based self help groups are Veterinary institutions followed by Dairy Co-operatives and Dairy extension offices. With respect to dairying Dairy co-operatives are providing information on day to day basis. Analysis of respondents of dairy farming showed that farmers had high level of knowledge on Mastitis, Veterinary care and disease control measures since the diseases like mastitis having direct impact on quality of milk and sustainability in dairying. Research findings revealed that high to moderate level of knowledge were required in livestock farming for adopting scientific breeding, management and marketing measures. Mass media like Television, Radio, Social media, etc may be effectively used for the dissemination of newer technologies.

Based on different pathways for knowledge transfer which already exist in the system, existing level of livestock information gained by the farmers, level of knowledge required for sustainable results and level of existing knowledge gap a concept model to fill the knowledge gap was designed. Since Kerala is implementing decentralized planning programme at the Grama panchayat level the concept model at the Grama panchayat level will be an ideal platform for knowledge transfer, Veterinary institutions at the grama panchayat have acquired the appropriate strength for developing a concept model.



University identified the knowledge gap among commodity based livestock self help groups and devised a conceptual model for knowledge dissemination at the Grama panchayat level. KVASU is in collaboration with Worldwide Universities Net work and Global innovative initiatives are involved in implementing sustainable livestock farming practices.

24X7 Veterinary Services

Scientific livestock production can only be achieved through scientific breeding, feeding, management, disease control and marketing. University is in the process of implementing an ICT based deliverables for the Stakeholders. The project named e Vetconnect is involved in providing 24X7 Veterinary Services across the State including emergency veterinary services. E vet connect has advisory call centres, ambulatory services, knowledge portal, vetipedia, disease forecasting system, fodder management system and hospital management system.

Startups in livestock sector

This will pave way for augmenting livestock production. University is implementing startup project in livestock production through integrating Vegetable, dairying, Poultry production and fisheries sector. The objective of the project is to deliver safe to eat agri and allied products at a premium price. A separate farm portal www.kasavu.in has been devised for this. University is pursuing further for developing a new delivery model for providing livestock products and services at the doorstep.

Entrepreneurship

In order to promote Entrepreneurship University has a Directorate of entrepreneurship giving due importance to student entrepreneurship, entrepreneurship development programmes and technology business incubation. University is in the process of implementing innovation incubation project through startups. The desire for innovation in India has been driven by search for low cost solutions to

public problems. Innovation is the application of new ideas to solve problems with resultant benefits to different stakeholders. Through innovation incubation, students can become employers rather than employees. Accelerating entrepreneurship and creating business are crucial for massive employment generation. Government of India is promoting start ups to scale up startup ecosystem in the country. There are 300 Government sponsored incubators in India sponsored by educational institutions. These incubation centres will convert the innovations in to viable products. Opportunity for startups was unparalleled especially in the IT sector because cloud and mobile technologies have reduced the cost of doing business. Innovation in startup ecosystem depends on ideas, validation process and good partner relationship. Major steps in this process are laying the foundation, creating a challenge book, building participation, experimentation with cost, speedy implementation, building innovation sand box and putting a margin of safety. In order to increase production and Productivity University is implementing productivity enhancement programmes through dissemination of appropriate technologies.

Precision farming, Productivity enhancement & food safety

Precision livestock farming, area specific mineral mixture and promotion of livestock based commodity interest groups are some of the projects which help to augment production. Value addition of milk and meat are the areas which help to increase profitability through livestock ventures. Centre for One Health of the University is involved in promoting the emerging concept of one health and food safety. The Entrepreneurship portal of the University will act as an interface between entrepreneurs, producers and consumers so as to maintain the agri commodity value chain. Sustainable farming and market led production coupled with quality will help to integrate small farmers to livestock commodity value chain.

Publications & Informatics

University published 20 books and 20 Broadcastable programmes on Livestock production for farmers and Entrepreneurs. University has a separate farm portal www.kasavu.in and an official portal www.kvasu.ac.in. Recently University linked with the National Career Services portal www.ncs.gov.in to promote skill development programmes and pursuing further for becoming a partner for One Agriculture One Science.

MOOC and Smartphone based courses

In the changing Scenario University is implementing Move on to Open Online courses (MOOC) in potential areas like Dairy and Poultry entrepreneurship, food safety, food security, one health and entrepreneurship. Smartphone based courses of the KVASU on organic farming will help to promote organic farming practices across the country in a big way. University launched Diploma programmes as skill development programmes in the areas of Dairying, Poultry production and Laboratory techniques

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