Livestock Sector of India: Income and Employment Opportunities for Rural Youth

Foundation Day Lecture by

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Chairman, NABARD

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1. Introduction

I deem it a great honour and privilege for having been given the opportunity to deliver the 'Foundation Day Lecture' on 2nd Foundation Day of Bihar Animal Sciences University, Patna. I am happy to know that within a short period of just two years, the university has already started the new College of Fisheries and has plan to start College of Veterinary and Animal Sciences at Kishanganj. The University has also expanded the list of M. V. Sc. And Ph.D. progammes. I congratulate the Vice Chancellor and state Leadership for this great start.

Today being the Foundation Day of Bihar Animal Sciences University, it would be very apt on my part to share and reflect upon the role and importance of livestock sector in generating additional employment, income and livelihood opportunities so that present day youth can take advantage of these opportunities and have a meaningful engagement for their survival.

Livestock commonly includes domesticated animals raised in an agricultural setting to produce commodities such as milk, meat, eggs, fur, leather, and wool. However, among all these commodities, milk is the most important of all in terms of quantum and value of output. Therefore, I would emphasise more on this sector having immense potential for generating additional income and employment.

2. Global Scenario in Livestock Sector

It is estimated that one billion people are involved in livestock value chains globally, with more than half of these dependent on livestock for their livelihoods. Globally, about 40% of agricultural GDP comes from livestock farming. This share varies from 15% to 80% across emerging and developing economies. Livestock products are considered most important source of high-quality protein for most people. Meat, dairy products, eggs and fish are considered as most important source of high-quality protein for most people and are estimated to provide 40% of the world's protein and 18% of its calories. The daily protein supply from animal products varies hugely between continents, from more than 60% in Northern America (or nearly 70 grams per person per day) to slightly over 20% (15 grams) in

Africa. The World Health Organization has recommended that sedentary adults should consume approximately 50 grams of protein per day (World Economic Forum). The global meat and fish production are estimated to the tune of 330.5 million MT and 178.8 million MT (www.statista.com).

2.1 Global Milk Production

Global milk output in 2018 is estimated at 843 million tonnes (Source : FAO, 2019), an increase of 2.2 percent from 2017, driven by production expansions in India, Turkey, the European Union, Pakistan, the United States of America and Argentina, but partially offset by declines in China and Ukraine, among few others. This increase has been contributed by higher dairy herd numbers along with improvements to milk collection processes especially in India and Pakistan, efficiency improvements in integrated dairy production systems, increased yield per cow especially in the European Union and the USA and enhanced utilization of idle capacity and higher demand from the processing sector and imports. Across the regions, Asia registered the highest milk output expansion by volume in 2018, followed Europe, North America.

World exports of dairy products expanded to 75 million tonnes (in milk equivalents), an increase of 2.1 million tonnes, or 2.9 percent from 2017, principally coming from the United States of America and Argentina, as also from India, Uruguay, and Mexico. By contrast, exports declined in a number of countries, in particular in the Islamic Republic of Iran.

2.2. Trend in International Milk Prices

As far as International dairy prices, measured by the FAO Dairy Price Index, are concerned, in 2018, it declined by 4.6 percent compared to that of 2017, reflecting declines in prices of all dairy products represented in the Index, with the highest fall registered for SMP (-5.6 percent), followed by cheese (- 5.2 percent), butter (-4.4 percent) and WMP (-2.9 percent). An additional factor that is noteworthy of mentioning on international dairy prices was the significant differentials that existed between various countries. The major factors contributing to price differentials were market segmentation, consumer preferences and geographical proximity to markets. The declining international market prices have had an impact on milk prices in different countries. However, the Wholesale Price Index (WPI) of milk prices has shown an increasing trend in India during last 6 years i.e. 2012-13 to 2017-18 (Economic Survey 2018-19) owing to 3 key drivers of increasing milk demand i.e. population growth, urbanisation and income growth. As a result, it still continues to have immense potential for

generating additional income and employment for aspiring youth of India.

3. Indian Livestock Sector Scenario

3.1 Increasing Pressure on Agricultural Landholding

The agriculture and allied sectors, contributing to 14.3% of Gross Value Added (GVA), are crucial for Indian economy in terms of employment and livelihood for small and marginal farmers who dominate the agriculture ecosystem in India. However, the average agricultural landholdings is declining and getting fragmented day by day putting more and more pressure on land holding especially among marginal and small farmers constituting 86.2 per cent of farmers with average land holding size of 0.6 Ha. This size of holding is not enough to produce surpluses from crop production that can financially sustain their families, highlighting the role of livestock sector in supplementing the income of such families. Although all India avg holding size is 1.08 ha (Agriculture Census 2015-16, MoA, GoI), Bihar is having the average holding size of just 0.39 ha, second lowest amongst all the states after Kerala (0.18 ha), if we leave the UTs of Lakshadweep (0.26 ha) and Daman & Diu (0.35 ha). In the light of declining size of land holding and Government of India's aim of 'Doubling of Farmers' Income by 2022', with diversification as one of the key strategies for achieving the same, Livestock sector plays a very important role.

3.2 Contribution of Livestock Sector in India

Because of the increasing pressure on agricultural land and need for generating additional income from allied sector, the activities of livestock, fishing and aquaculture are rising in importance and the share of livestock in GVA from total agriculture and allied sectors at All India level is estimated to be growing steadily from 21.8 per cent in 2011-12 to 27.4 per cent in 2017-18 at constant prices. The compound annual growth rate (CAGR) of livestock GVA is 7.3 per cent which is much higher than that for agriculture and allied sectors (2.8%). Today, India has emerged as the largest producer of milk (176.35 million MT) with 20.17 per cent share in total milk production in the world. Exports of animal products to the tune of Rs. 30530.12 crore, being 23.80 per cent of total agricultural exports during 2018-19, is another encouraging factor to support promotion of AH activities. Besides Dairy, Poultry farming has been recognised as a major intervention in many poverty alleviation and livelihood programmes. India is 3rd largest egg producer in the world after China and USA. Poultry is one of the fastest growing segments of the agricultural sector in India with growth rate hovering around 6-8%. The meat and fish production in India for the year 2017-18 was estimated at 7.4 million MT and 12.6 million MT

respectively. Total annual egg production during 2017-18 was estimated 95,217 million (Economic Survey 2019).

As far as contribution of livestock to the income of agricultural households is concerned, eight percent of total monthly income agricultural HH of Rs 8931/- comes from livestock farming, as indicated by NAFIS (2016-17). The agricultural HH reported higher ownership of livestock which form an important source of livelihood for them. Milch animal were owned by about 51 percent of agricultural households. Small ruminants were also present in 14 per cent of agricultural households. The Economic Survey of India (2017-18) indicates that the share of income of farmers from crop production increased by only 1% while it increased by 7% for livestock over a period of 10 years. All these facts underline the importance and role of livestock sector in enhancing the farmers' income. It has got immense potential in future in terms of attracting huge investment in backward and forward linkage, infrastructural gaps and value chain financing leading to generation of livelihood opportunities for aspiring entrepreneurs.

3.3 Future Prospect of Dairy Industry in India

The Department of Animal Husbandry, Dairying and Fisheries (DAHD&F), Ministry of Agriculture and Farmers Welfare, GoI has prepared a National Action Plan: Vision 2022 (NAP: 2022) till 2021-22 and 2023-24 taking into account the existing coverage of milk potential villages, farmer members, farmers income, growth of milk production, milk procurement, existing milk chilling, processing infrastructure with Cooperatives and MPCs, consumption pattern etc. The milk production has been envisaged to be 300 Million MT by 2023-24 from existing 176 Million MT. This would lead to increase in per capita availability of milk from current level of 375 grams/day to 592 grams/day in 2023-24.

The increase in marketable surplus as envisaged in 'NAP Vision 2022' at farm level would need to be procured by the organised sector. Subsequently, by the end of 2023-24, this would require creation of additional chilling capacities of 3493 Lakh Litres per day (LLPD), milk processing infrastructure of 3925 LLPD, Value Added Products of 12616 Metric Tonnes per day (MTPD) and Milk Powder Plant of 5440 MTPD along with additional Feed & Feed supplement infrastructure.

These additional infrastructural requirements could be bridged by Cooperatives, Producer Companies and Private Players. The total investment by these sectors would be Rs. 45710 crore, Rs. 5367 crore and Rs. 76378 crore respectively. In a nut shell, total investment required would

be to the tune of Rs. 1.27 lakh crore by the end of 2023-24 for the additional infrastructural requirements relating to dairy and animal husbandry sector hat would unleash the potential for income and employment generation. Bihar, being one of the most agriculturally dominant State, is expected to attract a substantial share of these investments for generation of livelihood opportunities for its youth.

4. Status of Livestock Sector in Bihar

In Bihar, the share of livestock in total GVA from agriculture and allied sectors is higher at 33.5 per cent in 2017-18 at constant prices. Although Bihar ranks 9th in milk production with total milk production of 9.24 million tonnes, the per capita availability of milk in Bihar is quite low at 239 gram per day as against 375 gram at the All India level underlining the need for more milk production.

As far as poultry farming in the state is concerned, Bihar ranks 16th in terms of egg production in the country, contributing 1.2% of total egg production. However, the per capita egg availability in the state (11 eggs per year) is quite low as compared to that at the all India average of 74 eggs per year. The state has tremendous potential for development of poultry sector as it is producing approximately 21.6 million MT of maize (10% of national production) every year which is an important ingredient in poultry feed formulation.

In this connection, I would like to thank as well as congratulate Government of Bihar for establishing this Animal Sciences University in Bihar which will certainly give a huge boost to the growth of livestock, fisheries and other animal science activities. However, looking at the vastness of the country and the potential that exists in animal husbandry sector, there is need to add many more such universities/Institute to the existing number of 36 comprising 17 Institutes/Directorates and 19 Universities & Deemed universities in the country.

Now I would like to dwell upon various credit and non credit initiatives that NABARD, as an apex Development Finance Institution has been undertaking for the cause of rural prosperity including support to livestock sector through dedicated Funds available with us. These initiatives are intended towards generation of additional income and employment for aspiring youth.

5. NABARD's Support to Animal Husbandry Sector

5.1. Support under Rural Infrastructure Development (RIDF)

NABARD has been providing financial assistance to state governments under Rural Infrastructure Development Fund (RIDF) for building rural infrastructure for as many as 37 activities relating to agriculture & allied sector, rural connectivity and social sector. Since inception of RIDF, cumulative sanction of Rs. 3,44,142 crore and cumulative disbursement of Rs. 2,68,220 crore has been made till 31 March 2019. This has led to creation of 330.44 lakh ha of irrigation potential, 4.68 lakh km of rural roads, 11.45 lakh metre of rural bridges and lot many of projects under social sector. Presently RIDF funding accounts for almost 20% of the total rural infrastructure funding of the country. Under RIDF, financial support for creation of modern breeding and veterinary infrastructure comprising construction of veterinary hospitals, purchase of vet care equipment, construction of veterinary colleges, veterinary university, etc., has been provided to State Governments. As far as Bihar is concerned, the cumulative sanction and disbursement of Rs 16,832.5 crore and Rs. 12,361.2 crore respectively has been made to Government of Bihar for rural infrastructure development. They may like to avail this concessional Fund for strengthening their breeding and veterinary infrastructure.

5.2. Dairy Processing Infrastructure Development Fund (DIDF)

To ensure that Dairy Cooperatives remain competitive for the sustained benefit of farmers, Dairy Processing and Infrastructure Development Fund has been set up with NABARD with a total corpus of Rs. 8004 crore over a period of 3 years (i.e. 2017-18 to 2019-20). Loan is extended to National Dairy Development Board (NDDB) / National Cooperative Development Corporation (NCDC) and in turn to eligible End Borrowers viz., Milk Unions, State Dairy Federations, Multi-state Milk Cooperatives, Milk Producer Companies and NDDB subsidiaries meeting the eligibility criteria under the project.

The objectives of the scheme are modernisation and infrastructure augmentation for milk processing and value addition and to ensure optimum price realisation by the primary producers. It envisages creation of additional milk processing capacity of 12.6 million litres per day (MLPD), modernisation capacity of 1.2 MLPD, milk powder processing capacity of 210 million tonnes per day (MTPD), and other infrastructure facilities during the implementation period. As on 31 March 2019, 22 projects in six states have been sanctioned to NDDB with loan amount of Rs. 2,157.56 crore for an investment of Rs. 3,147.22 crore in the dairy processing sector. An amount of Rs. 440 crore was disbursed to NDDB during 2018-19. However, we have not received any proposal from Bihar. In this context,

milk Unions in Bihar need to be strengthened to take benefit of this scheme.

5.3. Dairy Entrepreneurship Development Scheme (DEDS)

Increased milk production costs (due to higher feed and fodder prices, labour costs, marginal rise in milk prices compared to increase in input costs) made dairy farming as least remunerative. In order to encourage the dairy farming, GoI has introduced Dairy Venture Capital Fund (interest free loan cum interest subsidy). Subsequently, it was converted into capital subsidy scheme known as Dairy Entrepreneurship Development Scheme (DEDS) in 2010-11. NABARD is the Nodal agency for channelizing the subsidy to the beneficiary farmers. It's a very popular credit linked subsidy scheme, which enables farmers, especially small and marginal ones to establish dairy units (with two to ten animals) as also to invest in dairy infrastructure at subsidised costs. As on 31 March 2019, a subsidy of Rs. 1571.25 crore has been released through NABARD for 3,69,389 units financed under DEDS out of which Rs. 52.88 crore has been released for establishing 13,340 units in Bihar thereby giving boost to additional income and employment generation in the state

5.4. National Livestock Mission – EDEG component

NABARD is the Nodal agency for National Livestock Mission (NLM), launched by GoI in 2014-15 for quantitative and qualitative improvement in livestock production along with capacity building. It is a credit linked subsidy scheme enabling the farmers to go for investment and asset creation in poultry, dairy, goatary, etc., thereby, boosting the entrepreneurship and employment generation in rural areas. As on 31 March 2019, a subsidy of Rs 557.4 crore has been released through NABARD for 69,466 units financed under NLM out of which Rs 12.2 crore has been released for establishing 501 units in Bihar thereby giving additional income and employment to the respective entrepreneurs.

5.5. Fisheries and Aquaculture Infrastructure Development Fund (FIDF)

In line with its announcement in the Union Budget 2018–19, Government of India created the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) with a total corpus of Rs. 7,522.48 crore to be implemented over a period of five years (2018–19 to 2022–23). FIDF envisages establishment of 10 fishing harbours, 10 fish landing centres, 10 integrated cold chains, 500 modern fish markets, 15 fish processing units, and other infrastructure facilities. NABARD shall fund the public infrastructure

components under FIDF for each state government. Proposals are awaited to be supported under this Fund.

5.6. Animal Husbandry Infrastructure Development Fund (AHIDF)

Government of India has also announced the Animal Husbandry Infrastructure Development Fund (AHIDF) with a total corpus of Rs. 2,477.52 crore over a period of three years (2018–19 to 2020–21). It will be operationalized shortly.

5.7. Warehouse Infrastructure Fund (WIF)

WIF was instituted by the Government of India with a corpus of Rs. 5,000 crore in 2013–14. The WIF corpus was augmented with a further allocation of Rs. 5,000 crore in 2014–15. It offers scope for creating cold storage and dry storage infrastructure. Progressive livestock entrepreneurs, milk unions and milk federations can make use of this facility for augmenting storage infrastructure for reducing wastage and to contribute for enhancing farmer income. Till 31 March 2019, NABARD has financed 13.09 million metric tonnes (MMT) of scientific storage facilities, with an estimated capital investment of Rs. 9,786 crore under WIF, to provide impetus to overall development of post-harvest infrastructure in the country. The cumulative sanction and disbursement of Rs. 619.02 crore and Rs. 403.36 crore respectively was made to the State of Bihar.

5.8. Food Processing Fund (FPF)

Government of India instituted the Food Processing Fund in NABARD in 2014–15, with a corpus of Rs. 2,000 crore. Credit support under the dedicated fund enables public and private players for setting up food parks and food processing units (including livestock products processing units) in designated food parks (DFPs) notified by the Ministry of Food Processing Industries (MoFPI), Government of India. The cumulative loan sanction was Rs 531.35 crore for 11 mega food park (MFP) projects and three food processing units as on 31 March 2019. The cumulative disbursements as on 31 march 2019 stood at Rs. 312.85 crore. As far as Bihar is concerned, we have sanctioned and disbursed a sum of Rs. 46.5 crore and Rs. 20.3 crore respectively as on 31 March 2019.

5.9. Convergence, collectivization and market access - FPOs

FPOs have emerged as an effective mechanism to transform small holding based agriculture into a viable business enterprise to increase the net

income of farmers. NABARD had created a Producers Organisation Development Fund (PODF) with initial corpus of Rs 50.0 crore out of its operating surplus for credit facilitation/ capacity building/ hand holding & market linkages. GOI also created Producer's Organisation Dev & Upliftment Corpus (PRODUCE) in 2014-15, out of which 2154 FPOs have already been formed. NABARD also provide credit guarantee cover to NABKISAN Finance Ltd to provide loan to FPOs. Besides, the PRODUCE Fund which is new scheme for promotion & nurturing of 3000 FPOs by the convergence of PODF with the interventions under its other promotional programmes.

5.10. Many other Livelihood Programmes

Livelihood and Enterprise Development Programme (LEDP) aimed at livelihood promotion under project mode in cluster of villages. There is a provision for intensive training for skill building, refresher training, backward & forward linkages, handholding & escort support for credit linkages. Cumulatively, 61,000 SHG members have been supported through 532 LEDPs.

Similarly, Micro-Enterprise Development Programme (MEDP) is another NABARD's endeavours in skilling SHG members to enable them to start micro-enterprises. Cumulatively, around 4.94 lakh SHG members have been trained.

Further, NABARD's refinance and finance products along with promotional interventions or innovations address credit needs of the entire value chain of livestock sector viz., breeding facilities, veterinary care, production, procurement / aggregating, processing, cooling, storage, transportation and marketing. The related institutions including state Government can avail any of these facilities for building the vibrant livestock sector and realising the huge untapped potential available in Bihar.

6. Some Suggestions:

6.1. Support to Zero Budget Natural Farming

Union Budget 2019 has proposed to encourage Zero Budget Natural Farming. This will require production of lot many types of bio-fertilizers and bio-pesticides for different crops. This university can consider creating some vertical to do some dedicated research on this aspect.

6.2. Research on Enhancing Milk Yield of Desi Cows

There has been growing interest in A2 milk globally ever since the New Zealand-based A2 Milk Company was founded in 2000 to license intellectual property for determining the type of protein a cow produces in its milk. Studies by the National Bureau of Animal Genetic Resources (NBAGR), Karnal covering 22 *desi* breeds have established that predominant genotype in India's native cattle is A2A2, confirming that our indigenous cows and buffaloes produce A2 milk. The frequency of A2 allele was 100 per cent in the five high-yielding milk breeds — Red Sindhi, Gir, Rathi, Shahiwal and Tharparkar, meaning that these breeds do not have A1 allele or A1A1/A1A2 genotype.

Therefore, Indian native breeds of cows and buffaloes are of A2 milk type and hence are a source for safe milk. In the recent past, several dairy units (local units and some organised players) in India have started offering A2 milk at a premium to consumers. A few of the A2 milk brands are Amul Deshi, Desigo, Haritas, GoShrushti etc.

It is therefore suggested that university should work on improving the productivity of desi breeds by better breeding, better farm and feed management and better animal health. The government is taking steps to conserve native breeds of every region.

6.3. 'Rashtriya Gokul Mission and Rashtriya Kamdhenu Aayog

GoI is implementing the Rashtriya Gokul Mission since 2014 which is aimed at development and conservation, breed improvement and enhancement of milk of indigenous bovine. There are 41 registered indigenous cattle and 13 registered indigenous buffalo which are being supported under the Mission. The indigenous bovine used to be very robust and resilient to climate change and also high in fat and SNF. Rashtriya Kamdhenu Aayog has been established with a corpus of Rs 500 crore for conservation, protection & development of cows and progeny and also supporting in terms of laws & welfare measures of cows including abandoned cows. Another scheme of establishing 20 'Gokul Gram' in 13 states with financial support of Rs 200 crore for integrated cattle development centres to develop indigenous breeds including 40% non-descript breeds is in progress. Dumaraon and Buxer districts of Bihar have also been covered in this scheme. Govt of Bihar with the help of its line Department and Bihar Animal Science University need to ensure that the desired results are achieved in the shortest possible time.

6.4. Attaching few KVKs to the University

The Government of Bihar may consider attaching few existing KVKs to the university or establishing new KVKs under the control of Animal Science University. These KVKs may work as a hub to converge all the technology solutions developed by the university and can work as demonstration units, particularly in Aspirational Districts, for various technology solutions in a time-bound manner.

6.5. Support to Sorted Semen Technology

In order to have more and more female progeny, the 'Sorted Semen' technology is gaining ground in some of the states, e.g., Uttar Pradesh. Govt of Bihar may think of incentivizing this technology by subsidizing the cost of Artificial insemination through this technology by involving Department of Dairy and Animal Husbandry. The cost of it comes somewhere between Rs 1200/- –Rs 1500/- per AI dose which needs to be subsidised.

6.6 Climate Smart Livestock Farming

Climate change has become major threat and impacting livestock productivity and also food security of most vulnerable rural population. Climate Smart Livestock farming must be on the top of the agenda for future efforts on livestock development.

6.7. Preparation of Unit Cost and Scale of Finance

As we all know, the livestock and fisheries activities have now been made eligible for financing through Kisan Credit Cards. Since, these activities are being included for the first time, there is need to develop and make available recommended/model farming practices to the State Level/District Level Technical committees so that a genuine KCC limit is fixed for various livestock and fisheries activities. University is requested to help banks in this regard. Similarly, preparation of the model unit cost for establishing animal husbandry/ fishery units is based on latest scientific recommended practices. University too can help in preparing units costs for various AH activities.

6.8. Utilising the Demographic Dividend for Aspirational Youth

With 35 crore youth population in the 15-29 years age bracket, India is the youngest country in the world and is expected to remain young longer than

that of China and Indonesia, the two major countries that along with India determine the demographic features of the Asian continent. However, unemployment is the major challenge being faced by the rural youth and more so by female rural youth. The unemployment rate among the rural male youth and rural female youth (15-29 yrs) has been estimated at 17.4 per cent and 13.6 per cent during 2017-18 respectively. While a large section of rural youth may aspire to leave the agricultural sector but they are still employed in it as they lack skills required for other opportunities elsewhere.

Keeping the importance of the subject, NABARD organized a panel discussion on '**Engaging Rural Youth Gainfully'** on its 38th Foundation Day on 12 July 2019 at New Delhi. The inaugural session was addressed by Shri Anurag Singh Thakur, Hon'ble MoS, Finance & Corporate Affairs. The recommendations of the panel discussion included some very important suggestions like supporting promotion of agri startups in rural areas. As large number of agri-focussed start-ups are emerging, there is a need to strengthen the rural start-up ecosystem so that the new startups get the support needed for their sustainability. The business models of these start-ups can be made affordable and popularized amongst the target groups. The possible encouragements/ incentives which can be extended to innovators to come out with solutions to the problems being faced in the agriculture sector, should also be indicated.

There is need for developing agri-prenures who can be incubated with more care for translating their ideas into action since gestation period of incubation is slightly higher in case of agricultural enterprises. Although ICAR, IIMs State governments are making good efforts in incubating agri-prenures, NABARD too has established two agri-incubation centres at TNAU and Haryana Agricultural University to nurture budding agri enterprises. NABARD plans to establish more such centres, by collaborating with other institutions such as ICAR. After gaining reasonable experience, NABARD has established NABVENTURES Fund of Rs 500 crore to help entrepreneurship generation.

Today, we are witnessing another industrial revolution, which is driven by data and has the potential to raise human productivity across all sectors, including agriculture. Like in every other sector, artificial intelligence and machine learning techniques, combined with on the ground automated sensing using internet of things devices, is increasingly being deployed in agriculture and rural settings. Innovations by agri start-ups in form of products, services or applications can be a meaningful solution across the agricultural value chain. Therefore, building a conducive start up ecosystem can be a key driver for the rural ecosystem. State government

with the help of Bihar Animal Science University may consider working in this direction.

6.9. Agri-export as an Area of Engagement

GOI has recently come out with the Agri-export policy, 2018 which focuses upon 50 unique export oriented product-district clusters to boost the agricultural and horticultural export from India and aims at agri exports of US $ 60 billion by 2022. This offers good opportunities to rural youth for setting of Export Oriented Units/project in the identified clusters as also creating the necessary supply chain infrastructure encompassing storage, transportation, processing, quality control, etc. Government of Bihar may consider taking this into their sate Plan to help youth to get engaged in some economic activity.

6.10. Secondary Agriculture

Secondary agriculture is defined as a productive activity at enterprise level that utilizes as raw material the primary product and by-products of agriculture. For example a milk pooling and chilling unit in a village would be secondary agriculture. Secondary agriculture has huge potential for employment generation for rural youth and is a win-win for both the primary and secondary agriculture through the input-output relationship.

6.11. Some other issues for Consideration of State Government

(i) It is understood that there are about more about 20,600 milk societies covering 19,500 villages in Bihar. The marketing of milk in the State was 13.45 lakh liters per day against a collection of 16.13 lakh LPD. The suitable Roadmap aimed at bringing all the milk producers of the villages under milk cooperative system may be drawn.
(ii) Credit flow to small ruminant sub sector remained a constraint and innovative credit products promoted by NABARD viz., SHGs, JLGs and FPOs may be roped in by banks for expanding the credit for rearing of small ruminants.
(iii) State government, it seems, has not availed financial support under RIDF for veterinary department. Since this University is in the initial stage of development, Government may consider providing infrastructure support to the University by availing loan under RIDF.

7. Conclusion

I have shared with you the immense potential that livestock sector has in fulfilling the aspirations of rural and urban youth, various initiatives

being taken by NABARD and other interventions that need to be taken by other stakeholders.

At the end, I would like to once again thank Hon'ble Vice Chancellor of Bihar Animal Sciences University, Patna for having given me this opportunity to address this august audience. I wish all the very best to this University in all its future endeavours.

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