



## *The Integration of Livestock Production for Employment and Income Generation*

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### I. INTRODUCTION

India is a second biggest Country in the world in population 121 crore and first in the Bovine population 30.44 crore. Socio-economic development of rural households in India is highly dependent on livestock sector. The livestock production in addition to food provides draught power, hide, skin, bones, blood, fibers and organic manure to crop sector and also contributes to the industrial sector. It also makes significant contributions towards conservation of environment. Livestock sector not only supplements income from crop production and other sources but also provides regular income over the year absorbing income shock due to crop failure and generates continuous employment.

India, the landless population in about 15% and the small and marginal land holding households constitute about 65% of rural population and most of them own livestock. They normally keep low producing indigenous cows and small animals like sheep, goats and pig for their livelihood or for commercial purposes. India has achieved the highest milk producing nation in the world since 1999. In 1950 milk production was 17 million tones and now in 2012-13 has increased to 133.79 million tones. This was possible due to the implementation of a number of initiatives by Government of India both on the central and state level. The country exported 87,824.18 mt. of dairy products. Worth Rs. 1412.10 crore in 2012-13. In our national G.D.P. the share of livestock sector was 3.6% in 2010-11, with amount of 260300 crore.

### II. SCENARIO OF MILK PRODUCTION IN INDIA

Table-1

No.	Year	Milk Production (Mi.To.)	Per capita availability (gms/day)
1	1995-96	66.2	195
2	1996-97	69.1	200
3	1997-98	72.1	205
4	1998-99	75.4	210
5	1999-2000	78.3	214
6	2000-01	80.6	217
7	2001-02	84.4	222
8	2002-03	86.2	224
9	2003-04	88.1	225
10	2004-05	92.5	233
11	2005-06	97.1	241
12	2006-07	102.6	251
13	2007-08	107.9	260
14	2008-09	112.2	266
15	2009-10	116.4	273
16	2010-11	121.8	281
17	2011-12	127.9	291
18	2012-13	133.79	N.A.

Source: [www.nddb.org](http://www.nddb.org) (1-10-2013)

We can see the structure of milk production of last seventeen years in india growth rate is 93.20 percent, and milk availability growth rate is 49.23%. Here we can understand that since 1999 India become first in milk production respect to the world. As per the statistics from NSSO (2003-04) around 70 percent of dairy animals were reared by the smallholders and they owned about 52 percent of landholdings. Decrease in agricultural holding and their continuous subdivision among the family siblings seemed to be



affecting the consolidation of milch animal holdings. There are four types of organization in dairy sector viz co-operative, public, private and other sector. From December 1946 Amul was started in Gujarat, and co-operative dairy activity was starting with systematic form of rules and regulation in India. After Amul many district level co-operative dairies were started in Gujarat and other parts of India. The National Dairy Development Board (NDDB) was setup in 1965 in Anand, Gujarat and It's pioneer was late Shree Dr. Verghese Kurien. After Amul establishment, there were one by one district co-operative dairy setup by the rural activists. 67 years have passed away from the white revolution of Indian history. Now a days we have got many achievement of the co-operative dairy sector and created million of working employment and income particulars in rural areas. There are above 200 District level co-operative dairies and 1,48,985 village milk co-operative dairy, 1,47,82,000 milk producer members in 2011-12. In India per day 2.87 crore kg. milk procurement and 2,29,44,400 liters milk marketing in our nation. The counting of census 2011 figure shows that there are 14 crore farmenrs and 11 crore agricultural labours are depend on agriculture and livestock sector.

### III. LIVESTOCK PRODUCTION IN INDIA AT CURRENT PRICE (RS. IN CRORES)

Table-2

No.	Item	2009-10	2010-11
1	Milk Group	227652	262215
2	Meat Group	64398	72444
3	Eggs	12632	15123
4	Wool & Hair	435	401
5	Dung	24730	26068
6	Silk Worm Cocoons & Honey	2756	3320
7	Increment in Stock	8887	8799
	Total	341491	388370

Source: National Accounts Division (CSO)

From the table No.2, we can see that the total value of output from livestock sector is 3,41,491 and 3,88,370 crore rupees in year of 2009-10 and 2010-11. The share of this sector in our GDP is 3.82% and 3.64% for above years. Thus this is twin occupations connected for rural areas. Agriculture and Animal Husbandry business are highly correlated with each other. Now a days there are more than 50 percent of the working population of rural areas getting employment and substitute income for their livelihood. Everybody can say easily that livestock sector is oxygen for rural peoples.

### IV. REVIEW OF LITERATURE

The average annual income of members was estimated to be Rs. 45628.98 and that non-member was Rs. 14336.66. There were significant differences between members and non-members. The chi. Square values obtained for male, female and child were found significant. This might due to co-operatives dairies, in Haryana. About 75 million women as against 15 million men are engaged in dairying in India (GoI 2001). Women contribute 71 percent of labor force in livestock farming. (Singh and et.al. 2013)

The study was conducted with 20 SHGs for 205 respondents in three model-I, II & III in Jaipur district shows that the repayment capacity of the members who used the loan amount for dairy purpose was found to be higher at Rs. 31383.42 as compared to the members who used the loan amount for crop production at Rs. 26437.64 after meeting all the expenses. This may be due to relatively higher annual gross income from dairy and other sources (Rs. 2,02,658.83) as compared to crop farming (Rs. 1,52,524.57) (Devi and Jain-2011).

A study was carried out in north eastern hilly region by Rishikanta Singh and others on Integrated Dairy Development Programme (IDDP) results reflects that the overall annual gross income per milck animal per year for the beneficiary group was Rs. 50953 which was higher than non-beneficiary group was Rs. 50953 which was higher recorded only Rs. 48428. Further the overall annual average net income of beneficiary group was Rs. 4687 which was higher than non-beneficiary groups which was recorded only Rs. 2492. This yield an average daily income Rs. 23 per day per household for beneficiary as against Rs. 16 for non-beneficiary group. (Singh and et.al. 2012)

The study was conducted in the Kohima and Dimapur districts of Nagaland State during 2010-11 from 120 milk producing households. The average daily milk yield of milch crossbred and local cows was 4.34 liters and 1.47 liters, respectively. The average costs of milk production for crossbred milch cows and local milch cows were Rs. 18.52 and Rs. 28.15 per liter, respectively. The net returns was found to be positive for crossbred cows while it was negative for local cows across all the categories of households. (Khoveio and et.al.2012)

The study was done by Tanwar and others in Jaipur in 2007-08 shows that overall average net income per animal, per year was Rs. 9154.39 in co-operative members families, Category wise net income was Rs. 10799.70 in small, Rs. 8468.51 in marginal and



Rs. 6624.43 in landless families. It indicates that net income was maximum on small families and minimum on landless families. In case of non-member families overall average net income per animal per year was Rs. 3309.93. It was Rs. 4065.24, Rs. 3300.90 and 1904.59 in small, marginal and landless families respectively. Overall net profit per liter of milk was Rs. 4.73 in member families, while it was Rs. 2.01 in non-member families. (Tanwar and et.al. 2012)

The study conducted on 40 commercial dairy farms in Ahmednagar District of Maharashtra in 2009-10 shows that small category of commercial dairy farms generated a net surplus of Rs.1,92,898 per annum whereas the medium category of farms of 67216 and the large commercial farms earned net profit of Rs.3,12,178 per year. (Ghule and et.at.2010).

The study was carried out in Jaipur (Raj.) shows that net income of member households was observed to be higher from buffalo and crossbred cow (Rs. 3862 & Rs. 5154) as compared to non-member households (Rs. 2610 & Rs. 3062) respectively. The overall average annual labour utilization per household in dairy enterprise by member households (387.37 man days) was significantly higher than non-member households (246.40 man days). (Ganga & et.al. 2010)

Above the literature of research studies taken in our mind that there are a lot of opportunities of income and employment creation by animal husbandry occupation in the rural areas. According to Prof. M.S. Swaminathan in the dairy sector unlike in agriculture, the poor own 80 percent of the livestock and of the 70 percent of rural households that own livestock, the vast majority are either landless or marginal farmers. He adds that the dairy sector is a powerful level for increasing rural income and employment as well as for eradication of poverty. The sector provides employment to 18 million people of which 70 percent are women and 67 percent among them have no access to land, credit and technology.

In this connection I would like to share the quotation of a well learned person. Dr. Willaim Levis, in his book of power of productivity. : “Comparison of the working hours for spending the milk production in India, are equal to 45 million (4.5 crore) full time employees. This means that the employment creation from dairy industry in India are larger than any employment from any sector in the world.”

Before we discuss the story of creation of income and employment by the livestock production in our nation. We are going to know some concern both for this sector and we can understand the real role of this sector.

## V. SHARE OF AGRICULTURE & LIVESTOCK SECTOR IN GDP AT CURRENT PRICE

Table-3

Year	GDP-Total (Rs. In Billion)	GDP-Agriculture		GDP-Livestock Sector		
		(Rs. In Billion)	% to total GDP	(Rs. In Billion)	% to total GDP	% to Agri
1980-81	1224	425	34.72	59	4.82	13.88
1985-86	2338	700	29.94	139	5.95	19.86
1986-87	2600	744	28.62	156	6.00	20.97
1987-88	2949	835	28.31	183	6.21	21.92
1988-89	3527	1041	29.52	217	6.15	20.85
1989-90	4087	1154	28.24	275	6.73	23.83
1990-91	4778	1352	28.30	308	6.45	22.78
1991-92	5528	1593	28.82	375	6.78	23.54
1992-93	6307	1779	28.21	432	6.85	24.28
1993-94	7813	2218	28.39	507	6.49	22.86
1994-95	9170	2552	27.83	577	6.29	22.61
1995-96	10733	2778	25.88	650	6.06	23.40
1996-97	12435	3340	26.86	747	6.01	22.37
1997-98	13901	3535	25.43	819	5.89	23.17
1998-99	15981	4064	25.43	911	5.70	22.42
1999-2000	17865	4097	22.93	947	5.30	23.12
2000-01	19250	4089	21.24	1047	5.44	25.61
2001-02	20977	4425	21.09	1093	5.21	24.69
2002-03	22614	4255	18.82	1149	5.08	27.00
2003-04	25382	4830	19.03	1183	4.66	24.49
2004-05	29715	4766	16.04	1193	4.02	25.04
2005-06	33905	5368	15.83	1275	3.76	23.75
2006-07	39533	6047	15.30	1427	3.61	23.60
2007-08	45821	7163	15.63	1693	3.69	23.64



2008-09	53036	8066	15.21	2004	3.78	24.85
2009-10	30915	9246	15.18	2328	3.82	25.18
2010-11	71574	10938	15.28	2603	3.64	23.80

Source: National Accounts Division, Central Statistical Office, M/O Statistics & Programme Implementation

The above data shows that last thirty one years the share of livestock sector in our GDP (current prices) has been average 5.35 percent. Average share in Agriculture is 25 percent during this period. In the year 2010-11 the total share of livestock sector is 2603 Billion Rupees. This says that livestock sector plays vital role in rural economy.

### CONCLUSION

Agriculture farming and milk farming are correlated with each other in rural India. On an average there are 60-70 percent working population in rural areas are engaged in these two farming. Livestock contributes about 8 percent to the total employment in India mainly in rural sector. Therefore it is considered as important from rural livelihood perspective in poverty alleviation. It is estimated that livestock sector has the potential of generating 35-40 million of employment per annum.

Ali (2007) analyzed the association between rural poverty and livestock sector and observed as follows :

- The overall rural poverty in India declined from 45.6 percent in 1983 to 27.1 percent in 2000.
- The decline was faster in the states of Punjab, Haryana, Andhra Pradesh, Gujarat, Kerala, Karnataka, Maharashtra, Rajasthan and Tamilnadu.
- Growth in Agriculture and/or livestock sector in these states was also faster over the time in comparison to certain other states.
- There is significant inverse relationship between poverty and value of livestock output. The states with higher livestock share have low level of poverty.
- There was a declining trend in livestock holdings among landless households over the time, which an emerging issue needed to be tackled urgently by providing easy and common input resources.

Thus everybody can say that livestock sector is a key occupation for income and employment generating in rural areas.

### REFERENCES

1. Devi Ganga and D.K. Jain (2013), 'Financial Performance of Dairy Self Help Groups in Jaipur District of Rajasthan : A Comparative Analysis', *Indian Journal of Dairy Science*, Vol.64(5), PP.435-439
2. G.O.I. Central Statistical Office, New Delhi
3. Ganga and D.K. Jain (2012), 'Impact of Dairy Financing through self-Heep groups on Income and Employment Generation in Jaipur District of Rajasthan', *Indian Journal of Dairy Science*, Vol.65(4), 338-340
4. Ghule Avinash K. and others (2012), 'An Economic Analysis of Investment Pattern, Cost of Milk Production and Profitability of Commercial, Dairy Farms in Maharashtra', *Indian Journal of Dairy Science*, Vol.65(4), 335
5. Khanna A.K. and A.K. Sikka (2012), 'Animal Rearing for Rural Development' in Ed. By Dr. Anirudh Bharati & Dr. S.D. Chmola "Agriculture and Rural Development in India", Global vision pub., N.Delhi
6. Khoveio L.L. Michael and others (2012), 'Economics of milk production and its constraints in Nagaland', *Indian Journal of Dairy Science*, Vol.65(6), P.520
7. Sing Shiv Ran and others (2013), 'What the future Beholds for Smallholder Dairy Farming in India ?', *Indian Journal of Dairy Science*, Vol.66(2), PP. 142-148
8. Singh Rishikant and others (2013), 'Economic Impact of Integrated Dairy Development Project in North Eastern Hilly Region : Micro Evidence from Meghalaya', *Indian journal of Dairy Science*, Vol.66(1), PP.65-71
9. Singh Upayana and et. at. (2013), 'Economic Impact of Women Dairy Co-operative Societies on its Beneficiaries : A study in Haryana State of India', *Indian journal of Dairy Science*, Vol.64(5), PP.428-434
10. Tanwar P.S. and others (2012), 'Economics of Milk Production Among Member and Non-member Families of Dairy, Co-operatives in Jaipur (Rajasthan)', *Indian Journal of Dairy Science*, Vol.65(5), 408
11. The President desk (2013), 'Second White Revolution' in *Indian Dairyman*, Vol.63(10), 14-15
12. www.nddb.org (1-10-2013)