

Livestock Production System in SAARC Countries

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ABSTRACT Agriculture remains the predominant sector of the SAARC region's economies but it is dominated by small holdings. Livestock is an integral part of region's agriculture that provides draught power, farm yard manure, livestock products and employment to large population and is growing faster than crop sector. Milk and milk products is the most preferred item, meat comes next. South Asia is the hub of milk production. In India, surprisingly, the meat yield of all species remained stagnant during 2001 to 2012. Milk productivity and meat yield of different species, however, varies significantly across the SAARC countries which imply there is scope to improve it further. The growth in the livestock production is largely coming from the population increase which may not be sustainable in the future. The productivity levels need to be enhanced by better feeding and management in short run and by improving genetic base of the animals through breeding programmes in long run. There is need of more investments in research and development in livestock sector so as to meet growing demand for animal products in SAARC countries.

INTRODUCTION

SAARC Region is home to 1.57 billion people (23.7% of global population), but the region's geographic coverage is mere 3.95 percent of the global land mass. The region is broadly classified as low-income or low-middle income category in global parlance. It is estimated that 28.83 percent people in the region live below poverty line. Agriculture remains the predominant sector of the region's economies. South Asia is the hub of milk production. Milk production among the SAARC countries is the highest in India that is, 73.38 percent followed by Pakistan (22.25%) during 2012. Poultry production increased at a faster rate than other type of meats. In India, surprisingly, the meat yield of all species remained stagnant during 2001 to 2012 (Anonymous 2016). A vast majority of population in the region lives in rural areas and depends upon agriculture for livelihood and sustenance. Because of high population pressure on natural

resources that is, land, water; ecosystem are showing symptoms of degradation and fatigue. As a result, growth rate of agriculture in SAARC region is low and unstable. Except for Maldives, share of agriculture in total Gross Domestic Product (GDP) varies between sixteen percent to forty percent. In Maldives, less than three percent of total GDP is contributed by agriculture. So, the deviation from total dependence on agriculture becomes a necessity. Diversification of agriculture through dairy enterprise plays a significant role as dairy farming provides nutrition, draught power, organic manure, employment and continuous flow of income. About one-third to half of the world's poor population live in South Asia and many of them rely on dairy farming for a part of their livelihood. Even though South Asia is one of the world's major milk producing regions - with India having become the world leader in milk production in 1998 - milk production remains predominantly a smallholder business. Animal production in South Asia is predominantly part of mixed crop-livestock farming systems vital for the security and survival of large numbers of poor people. In such systems, livestock generate cash income, provide draught power and manure, utilize crop residues and by-products making them partially, closed systems, and thus the most benign from the environmental perspective (Parathasarathy and BIRTHAL 2008). The pur-

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pose of the present paper is to examine the recent developments in livestock production in SAARC countries. The paper proceeds to provide a brief description of livestock production in terms of population, production, productivity and consumption of livestock products.

MATERIAL AND METHODS

The required data has been taken from secondary sources that is, FAOSTAT, Statistical data book for Agricultural research and development in SAARC countries, 2008-09 and SAARC Statistical Yearbook 2012. The data are presented in tabular form using simple averages and percentages.

RESULTS AND DISCUSSION

Land and Human Population

Agriculture including livestock is an important source of livelihood for over half of the SAARC countries' population. Despite rapid growth of some of the economies in the region, percentage of agricultural population has witnessed little decline over time as shown in Table 1. Decline is maximum in India (16%) followed

by Bangladesh (9%) and Maldives (8%). Because of high population pressure on land, percentage of arable land to total area is much higher than the global average, for example the share of the region in global arable land is fourteen percent. Percentage of arable land to total land is highest in Bangladesh (58.10%) followed by India (53.10%) and Pakistan (26.50%), and minimum in Bhutan that is, two percent. Agriculture farming in the region is dominated by small holdings. During the year 2012, per capita arable land was less than 0.10 ha in all SAARC countries except Afghanistan and it is declining continuously due to increasing population.

Consumption of Livestock Products

Livestock is an integral part of SAARC countries. Livestock sector provides a variety of food and non-food products. The major livestock products are milk, meat, wool and eggs. Growing human population, rising per capita income and urbanization are causing rapid changes in food consumption pattern. Milk and milk products is the most preferred item, meat comes next. It has been observed from the data presented in Table 2 that consumption of whole milk, butter and ghee, cheese and meat increased over time in the region. Per capita consumption of meat

Table 1: Land and human population in SAARC countries

Countries	Year	Population		Land		
		Total (million)	Agricultural (%)	Total land (Million ha.)	Arable land (% of total)	Per capita arable land (hac)
Afghanistan	2001	21.41	62.55	65.22	11.39	0.35
	2012	31.4	59.70	65.22	11.90	0.3
Bangladesh	2001	142.17	54.42	13.02	61.88	0.06
	2012	148.69	45.40	13.02	58.10	0.10
Bhutan	2001	0.57	93.21	4.01	3.24	0.23
	2012	0.72	92.80	3.83	2.0	0.10
India	2001	1064.16	64.00	297.32	53.91	0.15
	2012	1224.60	48.40	297.31	53.10	0.1
Maldives	2001	0.28	26.35	0.03	13.33	0.01
	2012	0.32	18.40	0.03	13.33	0.01
Nepal	2001	24.96	93.32	14.34	16.44	0.09
	2012	30.0	93.0	14.34	16.70	0.1
Pakistan	2001	147.29	48.13	77.09	27.87	0.15
	2012	177.10	42.70	77.08	26.50	0.1
Sri Lanka	2001	18.81	46.22	6.46	14.17	0.05
	2012	20.32	43.30	6.46	19.1	0.1

Tables 1-7 have been prepared by compiling data from Statistical Data Book for Agricultural Research and Development in SAARC Countries, 2012 and FAO stat data

Source: Anonymous 2012b, Statistical Data Book for Agricultural Research and Development in SAARC Countries, 2012

Table 2: Consumption of animal products in SAARC countries

Countries	Year	Total consumption				Per capita consumption (Kg/capita/ Annum) whole			
		Whole milk (million tones)	Butter and ghee (million tones)	Cheese (000 tones)	Meat (million tones)	Whole milk	Butter and ghee	Cheese	Meat
Afghanistan	2001	0.54	0.02	2.32	0.27	25.50	1.10	0.70	13.00
	2012	0.91	0.03	2.13	0.39	31.10	1.20	1.00	13.40
Bangladesh	2001	1.78	0.02	1.07	0.44	12.41	0.13	0.01	3.06
	2012	3.51	0.02	1.00	0.62	19.10	0.20	0.01	4.10
India	2001	40.85	2.33	0.26	3.78	38.53	2.20	0.00	3.57
	2012	60.62	3.43	0.70	5.15	49.60	2.80	0.00	4.20
Maldives	2001	0.01	0.00	0.03	0.00	53.00	0.90	0.10	14.18
	2012	0.01	0.00	0.00	0.01	75.80	1.30	0.00	21.10
Nepal	2001	0.72	0.01	0.08	0.24	28.67	0.60	0.00	9.66
	2012	1.17	0.02	0.07	0.33	38.90	0.90	0.00	12.20
Pakistan	2001	12.63	0.51	0.42	1.74	83.25	3.36	0.00	11.50
	2012	18.38	0.68	0.98	2.73	104.40	3.80	0.01	15.50
Sri Lanka	2001	0.50	0.00	1.05	0.12	26.30	0.07	0.06	6.27
	2012	3.02	0.00	1.22	0.13	35.40	0.10	0.10	6.80

Source: FAOSTAT, 2012

was highest in Maldives (21.10kg) followed by Pakistan (15.5 kg), Afghanistan (13.40 kg) and Nepal (12.20 kg) during the year 2012. Lowest per capita meat consumption was in Bangladesh (4.10 kg) followed by India (4.20 kg) and Sri Lanka (6.80 kg). Further, rapid increase took place in meat consumption in Maldives (48.8%), Pakistan (34.78%) and Bangladesh (33.98%) between 2001 to 2012, in other countries it either remained stagnant or increased marginally.

Per capita whole milk consumption in Pakistan is highest in the Region (104.40 kg). Lowest milk consumption in the region is in Bangladesh (19.10 kg), followed by Afghanistan (31.10 kg) and Sri Lanka (35.40 kg). Highest per capita butter and ghee consumption is in Pakistan (3.80 kg) followed by India (2.80 kg) and Maldives (0.13 kg). Between 2001 and 2012, increasing trends in per capita whole milk consumption were observed in all the countries. Consumption of cheese has remained almost unchanged. Although, per capita consumption did not increase significantly but their total consumption increased. The increase in total consumption of milk and meat was more marked as compared to the increase in their per capita consumption. During 2001-12, the total consumption of milk increased by 53.64 percent and that of butter and ghee, cheese and fat by meat by 44.64, 16.63 and 42.03 percent respectively. Meat and milk

demand in Bangladesh are expected to expand as average consumption is below that in developing countries and far below that in neighboring countries (FAO 2005).

Share of Animal Products in Calories, Proteins and Fat Supply

As shown in Table 3, highest per capita calories intake is in Maldives (2722/day) and lowest in Afghanistan (2107/day) among the countries of SAARC region during 2012. Similarly, per capita protein intake was observed to be highest in Maldives (107.80 gm). Animal products are rich source of protein and fat. The level of their intake in SAARC countries is shown in Table 3. Highest intake of calories and protein, which comes from animal sources, is in Maldives that is, 691 (25.39%) and 72.20 gm (66.98%) respectively, followed by Pakistan with 519.00 (21.48%) and 26.50 gm (40.95%). But fat intake contributed by animal products is highest in Pakistan 35.70 gm (47.91%) followed by Maldives with 33.40 gm (50.75%). Lowest contribution of animal products in calories, protein and fat intake is in Bangladesh with 83.38 gm (3.66%), 7.82 gm (15.48%) and 4.72 gm (16.32%), respectively. Total as well as animal products wise intake of calories, protein and fat, follows the similar pattern in the region.

Table 3: Share of animal products in calories, protein and fat supply (per capita/day)

Countries	Year	All sources			Animal products		
		Calories (No.)	Protein (gm)	Fat (gm)	Calories (No.)	Protein (gm)	Fat (gm)
Afghanistan	2001	1737.00	49.70	27.00	202.12(11.63)	11.10(22.33)	15.10(55.92)
	2012	2107.00	58.90	33.10	215.11(10.20)	12.20(20.71)	15.40(46.52)
Bangladesh	2001	2196.2	46.85	26.54	68.95(3.14)	6.39(13.64)	3.92(14.77)
	2012	2430.0	54.80	29.60	104.00(4.28)	9.80(17.88)	5.80(19.60)
India	2001	2259.01	54.45	44.21	181.50(8.03)	9.61(17.65)	12.17(27.53)
	2012	2459.0	60.10	51.80	228.00(9.28)	12.10(20.13)	15.10(29.15)
Maldives	2001	2557.41	105.55	61.21	600.00(23.46)	71.84(68.06)	26.53(43.34)
	2012	2722.00	107.80	65.80	691.00(25.39)	72.20(66.98)	33.40(50.75)
Nepal	2001	2265.50	57.39	37.32	148.93(6.57)	8.69(15.14)	10.25(27.47)
	2012	2580.00	66.00	53.70	195.00(7.55)	11.00(16.67)	13.70(25.51)
Pakistan	2001	2260.20	58.28	62.86	420.56(18.61)	21.65(37.15)	28.72(45.69)
	2012	2428.00	64.70	74.50	519.00(21.38)	26.50(40.95)	35.70(47.91)
Sri Lanka	2001	2379.76	53.96	44.92	142.15(5.97)	13.71(25.41)	7.41(16.50)
	2012	2488.00	59.20	46.80	169.00(6.80)	16.30(27.53)	8.50(18.16)

Figures in parentheses are per cent age to all sources
Source: FAOSTAT, 2012

Livestock Distribution and Growth

Livestock is an integral part of SAARC countries agriculture that provides draught power, farmyard manure and livestock products and large number of population is dependent on it.

Livestock sector has been growing faster than the crop sector in the region. As shown in Table 4, among the SAARC countries, cattle population is maximum in India (74.14%) followed by Pakistan (12.87%) during 2012. Buffalo population was the highest in India (74.25%) followed

Table 4: Distribution and growth of important livestock species (000 heads)

Countries	Year	Buffalo	Cattle	Goat	Sheep	Pig	Poultry
Afghanistan	2001	-	2249	5003	13955	-	6844
	2012	-	5244	7311	13820	-	13212
Bangladesh	2001	920	24100	34400	1143	-	158880
	2012	1443	23195	55000	1890	-	288566
Bhutan	2001	2	355	38	25.50	41400	230
	2012	6	342	39	10.78	29484	549
India	2001	97922	185181	124358	61469	13519	489012
	2012	114485	212615	160000	75000	94000	974000
Nepal	2001	3624.03	6982.66	6478.38	850.17	912530	20201
	2012	5133.13	7244.94	9512.95	807.26	1137489	45548
Pakistan	2001	23335	22424	49140	24236	-	158500
	2012	32700	36900	63100	28400	-	383700
Sri Lanka	2001	292.30	1153.20	492.60	11.70	68300	10667
	2012	414.63	1235.50	383.45	9.70	89250	14051
<i>Annual Growth (%) 2001-2012</i>							
Afghanistan	2001-12	-	12.11	4.19	-0.09	-	8.46
Bangladesh	2001-12	5.17	-0.34	5.44	5.94	-	7.42
Bhutan	2001-12	18.18	-0.33	0.24	-5.25	-2.62	12.61
India	2001-12	1.54	1.35	2.61	2.00	54.12	9.02
Nepal	2001-12	3.79	0.34	4.26	-0.46	2.24	11.41
Pakistan	2001-12	3.65	5.87	2.58	1.56	-	12.92
Sri Lanka	2001-12	3.80	0.65	-2.01	-1.55	2.79	2.88

Source: FAOSTAT, 2012

by Pakistan (21.21%). India and Pakistan together is home for about 89.96 percent of the bovine population of SAARC countries.

Further, growth rates in animal numbers from 2001 to 2012 have been shown in Table 4. Buffalo population has been increasing in the Region. Maximum growth has been observed in Bhutan (18.18%), Bangladesh (5.17%) and Sri Lanka (3.80%). In case of cattle, growth is highest in Afghanistan (12.11%) followed by Pakistan (5.87%) and in other countries, it is comparatively lower. The goat population has declined by 2.01 percent in Sri Lanka. It showed an increasing trend in other countries. Sheep population declined in Bhutan (5.25%), and in Sri Lanka (1.55%) whereas the same increased by 5.94 percent in Bangladesh. Pig population grew by 54.12 percent in India, 2.79 percent in Sri Lanka and 2.24 percent in Nepal. Poultry population increased significantly in all the countries. Large ruminants outnumber small ruminants in India, Bhutan, Nepal and Sri Lanka whereas, small ruminants outnumber in Afghanistan, Bangladesh and Pakistan. The population of buffaloes has increased over time in all the countries, whereas that of cattle, goat and sheep, has declined in

some countries. Change in the livestock population over time is a result of interactive forces such as increasing mechanization of agriculture, declining land area, increasing number of small holdings and changes in tastes and preferences. There is an urgent need to rationalize the large ruminant populations. With waning dependence on draught animals for farm power in most countries, the overall size of the bovine population can be brought down (Kurup 2004).

Production and Productivity

South Asia is the hub of milk production. Milk production among the SAARC countries is the highest in India that is, 73.38 percent followed by Pakistan (22.25%) during 2012. In these countries, major share of milk is produced by buffaloes. In Nepal and Pakistan, buffaloes contributed 67.41 and 62.47 percent respectively followed by India with 52.86 percent (Table 5). In the other countries, cow accounts for bulk of milk production as in Bhutan 99.79 percent followed by Sri Lanka (77.66%) and Afghanistan (81.88%). Growth of milk production in most of the countries was positive except Bhutan where

Table 5: Milk production and yield

Countries	Year	Total (Million tons)	Per cent share of		Yield (kgs)	
			Cow	Buffalo	Cow	Buffalo
Afghanistan	2001	1.51	79.27	-	500.00	-
	2012	1.84	81.88	-	418.80	-
Bangladesh	2001	2.15	36.43	1.16	205.70	403.20
	2012	3.51	23.72	1.07	205.40	404.30
Bhutan	2001	0.04	99.16	0.84	257.00	400.00
	2012	0.03	99.79	0.21	257.00	400.00
India	2001	83.42	41.38	54.43	1011.90	1494.10
	2012	124.85	43.25	52.86	1196.00	1709.80
Nepal	2001	1.20	28.55	65.10	402.00	834.10
	2012	1.76	27.40	67.41	469.40	866.90
Pakistan	2001	26.28	31.17	66.41	1179.50	1941.40
	2012	37.86	35.38	62.47	1263.50	1971.00
Sri Lanka	2001	0.16	80.72	15.99	601.20	478.60
	2012	0.30	77.66	20.42	842.90	654.50
<i>Annual Growth (%) 2001-2012</i>						
Afghanistan	2001-12	1.99	0.30	-	-1.48	-
Bangladesh	2001-12	5.75	-3.17	-0.71	-0.01	0.02
Bhutan	2001-12	-2.27	0.06	-6.82	0.00	0.00
India	2001-12	4.51	0.41	-0.26	1.65	1.31
Nepal	2001-12	4.24	-0.37	0.32	1.52	0.36
Pakistan	2001-12	4.01	1.23	-0.54	0.65	0.14
Sri Lanka	2001-12	7.95	-0.34	2.52	3.65	3.34

Source: FAOSTAT, 2012

it was negative. This growth was result of both components that is, number of animals and their productivity. Average milk yield of cows was highest in Pakistan with 1263.50 kg/annum followed by India with 1196 kg/annum respectively. Increase in milk production in Afghanistan was only because of increase in number of cows as milk yield per animal has declined over time. In other countries, growth of cow milk yield was marginally positive except. As far as buffalo is concerned, average milk yield was highest in Pakistan with 1971 kg/annum followed by India with 1709.80 kg/annum. Lowest milk yield of both cow and buffalo was in Bangladesh and Bhutan. The significant variation in the cow milk yield implies both constraint and opportunities to raising the milk yield in countries with levels of yield through better feeding, management and technology including introduction of quality germ-plasm. Similar is the in case with buffaloes. It is important species in India and Pakistan, but its milk yield has not shown significant growth over time. In short run, better feeding and management can enhance the milk yield. In long run, growth in milk yield has to come from genetic improvement (Taneja and Birthal 2005). The current situation of livestock is due to growing high livestock population rather than productivity per animal. By increasing productivity per animal problem related to diseases and feed can be solved and rural areas will attain economic growth (Shabbir 2011). India has a competitive advantage in the production of milk. Producer prices of milk are lower in India than in the lead-

ing exporting countries. The price advantage of India *vis-à-vis* other leading countries enhances its prospects for export of milk to countries belonging to the South Asian Association for Regional Cooperation (SAARC), most of which are deficient in meeting their domestic requirements (Ahuja 2012). Low production costs ensure South Asian farmers' global competitiveness. This applies particularly to Pakistan and India whereas in Bangladesh, total production costs for milk lie slightly above the world market price. In particular, if the cost of family labour on small farms is discounted, South Asian dairy farms are highly competitive in comparison with those in other regions. Furthermore, South Asian dairy farms have large productivity potentials that have not been tapped so far and offer the opportunity to further improve on competitiveness (Anonymous 2012a). The new opportunities lie in trade, marketing, biotechnology, shifting demand preferences in domestic and overseas markets, technology sharing, resource sharing and investments in research, extension and infrastructural development. SAARC countries need to develop science-based strategies for collective response to challenges and opportunities and global shocks in agriculture (Chand 2010).

Meat Production

Table 6 shows distribution and composition of meat growth among SAARC countries. India is the number one meat producing country with

Table 6: Meat production in SAARC countries

Countries	Year	Total (Million tons)	Percent share in production					
			Cattle	Buffalo	Goat	Sheep	Pig	Poultry
Afghanistan	2001	286.62	37.68	-	14.06	39.63	-	4.58
	2012	318.80	43.60	-	13.87	34.81	-	4.70
Bangladesh	2001	438.20	39.80	0.96	29.44	0.59	-	27.16
	2012	630.51	30.92	1.01	31.72	0.65	-	26.16
Bhutan	2001	6.70	72.34	0.51	2.55	1.57	19.17	3.87
	2012	6.73	75.60	0.47	2.40	1.33	14.70	5.40
India	2001	5472.67	26.54	23.28	7.92	4.10	8.83	23.89
	2012	6291.60	17.43	24.30	9.55	4.70	5.22	35.26
Nepal	2001	241.43	19.54	51.71	15.64	1.18	6.31	5.61
	2012	339.35	15.15	50.80	15.90	0.80	5.38	11.89
Pakistan	2001	1747.58	24.49	27.47	18.37	9.10	-	19.67
	2012	2898.62	27.13	27.60	9.98	5.55	-	28.77
Sri Lanka	2001	116.57	23.51	2.91	1.36	0.14	1.67	70.41
	2012	142.28	20.73	3.41	0.98	0.07	0.98	73.80

Source: FAOSTAT, 2012

6291.60 million tonnes (59.20%) followed by Pakistan with 2898.62 million tonnes (27.27%) during the year 2012. There is wide range variation in the contribution of different species across the region. Major share is contributed by cattle and buffaloes in most of the countries. Goat in Bangladesh and sheep to Afghanistan are important contributors to total meat production. Poultry is important in Sri Lanka with a share of about 73.80 percent in total meat production. Overall, poultry production increased at a faster rate than other type of meats.

Meat Yield

Table 7 presents the meat yield of different species in SAARC countries. During the year 2012, cattle meat yield was the highest in Pakistan with 194.80 kg/animal followed by Afghanistan, Sri Lanka and India with 180.10, 169.80 and 102.5 kg/animal respectively. Buffalo meat yield was maximum in Nepal that is, 220 kg/animal followed by India with 138 kg/animal. In goat meat yield, India stands fifth after Sri Lanka, Pakistan, Afghanistan and Nepal. There was no pig meat production in Pakistan, Afghanistan and Bangladesh on religious grounds. India stands third in pig meat yield with 35 kg/animal

after Sri Lanka (70 kg/animal) and Bhutan (36.70 kg/animal). In poultry meat yield, India stands second jointly with Sri Lanka with 1.14 kg/animal after Pakistan (1.24 kg/animal). In the context of growth rates of meat yield during 2001-2012, cattle meat yield increased by 2.25 percent in Sri Lanka. Buffalo meat yield increased by 0.30 percent in Nepal. Goat meat yield increased by 0.22 percent in Pakistan. In India, surprisingly, the meat yield of all species remained stagnant during the above period. Meat yield of different species however varies significantly across the SAARC countries. Although there is biological limit, inter regional variation in meat yield implies scope to improve the productivity. It can be increased by better feeding and management in short run and by breeding in long run. In India, cattle are maintained mainly for milk and draught power and such dual-purpose animals are often poor milk yielders. Meat production is an adjunct to these and it is only the unproductive and fragile animals that are culled for slaughtering. Further, cattle are considered to be sacred and its slaughtering is banned in most of the Indian states. Similarly, buffalo is valued for milk with draught power and meat as adjuncts. Male buffalo are not good source of draft power and often slaughtered at a very young age (Taneja and BIRTHAL 2004).

Table 7: Meat yields of different species (carcass weight (kg/animal))

Countries	Year	Cattle	Buffalo	Goat	Sheep	Pig	Poultry
Afghanistan	2001	180.00	-	13.00	16.00	-	0.80
	2012	180.10	-	13.00	16.00	-	0.80
Bangladesh	2001	70.40	80.70	7.00	6.70	-	0.73
	2012	71.70	80.10	7.00	7.00	-	0.70
Bhutan	2001	85.00	85.00	9.00	10.00	36.70	0.70
	2012	85.00	85.00	9.00	10.00	36.70	0.70
India	2001	102.50	138.00	10.00	12.00	35.00	0.92
	2012	102.50	138.00	10.00	12.00	35.00	1.14
Nepal	2001	85.00	213.00	11.30	8.90	31.70	0.85
	2012	85.00	220.00	10.90	9.00	31.80	0.85
Pakistan	2001	191.90	120.00	16.60	16.50	-	1.16
	2012	194.80	120.00	17.00	14.90	-	1.24
Sri Lanka	2001	136.00	113.00	19.90	20.00	72.50	1.32
	2012	169.70	113.00	19.90	20.00	70.00	1.14
<i>Annual Growth (%) 2001-2012</i>							
Afghanistan	2001-12	0.01	-	0.00	0.00	-	0.00
Bangladesh	2001-12	0.17	-0.07	0.00	0.41	-	-0.37
Bhutan	2001-12	0.00	0.00	0.00	0.00	0.00	0.00
India	2001-12	0.00	0.00	0.00	0.00	0.00	2.17
Nepal	2001-12	0.00	0.30	-0.32	0.10	0.03	0.00
Pakistan	2001-12	0.14	0.00	0.22	-0.88	-	0.63
Sri Lanka	2001-12	2.25	0.00	0.00	0.00	-0.31	-1.24

Source: FAOSTAT, 2012

CONCLUSION

Livestock is an integral part of SAARC countries' agriculture that provides draught power, farm yard manure livestock products and large number of population is dependent on it. Livestock sector has been growing faster than crop sector in the region. Milk is relatively more important in diet. The growth in the production is largely coming from the increased number of animals and may not be sustainable in the future if efforts are not made to enhance the existing productivity levels. Growing human population, rising per capita income and urbanization are causing rapid changes in food consumption pattern. Change in the livestock population over time is a result of interactive forces such as increasing mechanization of agriculture, declining land area, increasing number of small holdings and changes in tastes and preferences.

RECOMMENDATIONS

The production levels can be increased in short run by better feeding and management, but if we want to increase it in the long-run, then we have to improve genetic base of the animals through breeding programmes. This is of utmost importance as the demand for animal products is increasing very fast due to population growth and changed taste and preferences. Hence, there is a need for increasing the investments in research and development in livestock sector at least at par with the contribution of this sector to the national income.

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