



Agriculture

Elixir Agriculture 46 (2012) 8080-8085

Elixir
ISSN: 2229-712X

Livestock sector in sindh: potential, problems and policy recommendation

Hamzo Khan Tagar¹ and Syed Roshan Ali²

¹Deputy Program Manager in Reform Support Unit (RSU), World Bank Funded Program of Education & Literacy Department Government of Sindh at NJV School Building MA Jinnah Road Karachi, Sindh Pakistan.

²Applied Economics Research Centre (AERC), University of Karachi. P.O Box No: 8403 Karachi-75270, Sindh, Pakistan.

ARTICLE INFO

Article history:

Received: 5 March 2012;

Received in revised form:

15 April 2012;

Accepted: 27 April 2012;

Keywords

Livestock,
Arid Zone,
Markets,
Feeding,
Breeding,
Dairy Productions.

ABSTRACT

The zone wise Sindh land resources analysis finds sufficient evidence that Sindh Southern Province of Pakistan is naturally divided in different zones and every zone offers excellent product potential of its own. The central cropping zone has been found suitable for crop cultivation and horticultural farms. The coastal and hilly areas are suitable for forest tourism and fishing. The arid zone boasts of great potential for live stock breeding and hunting grounds with range land forest. The policy makers neglected the absolute advantages of each and every zone during policy formulation since long. This paper tries to find potential of livestock's in Sindh, main problems in its development and feasible policy recommendations for further development of the sector and concludes that low level of feeding, traditional method of breeding, inadequate health facilities institutional mismanagements and low extent of markets and infrastructure are major obstacles in its development. The study also concludes that livestock sub sector naturally offer great potential particularly in arid zone and need policy maker's immediate attention.

© 2012 Elixir All rights reserved.

Introduction

The livestock is the main supporting sub-sector of agricultural sector. The value added of livestock is highest as round about 49 percent in the agricultural value added. It contributes over 10% to the gross domestic production (GDP). The livestock enterprises provide employment to whole family and other labour. The small scale farmers mainly depend on it. In the rural areas, it is the source of income for over 30% of rural population. This sector has contributed particularly in food items, fiber, work power, supplement farm income and other agricultural uses from time immemorial. "The performance of Livestock – the single largest contributor to overall agriculture (53.2 percent) however, grew by 4.1 percent in 2009-10 as against 3.5 percent last year" (Economic Survey of Pakistan 2011 pp.14).

The traction power needs, provision of manure for fertility of land, materials for industry, cash security for poor rural masses, social and cultural identity of the region, medium of exchange in trade activities and generates huge amount of income which leads to increasing ratio of saving and investment. In this way, livestock contributions usher in an era of prosperity and alleviate curse of poverty. In the production sense, milk, meat and other dairy productions i.e. skins, wool, hides, hair and eggs are the major products of livestock sub-sector of agriculture. The buffaloes, cows and goats and poultry are kept for milk and meat production. In the use of animal power, the farmers keep bullock and camels for cultivation and transport.

The camels, horses, mules and asses are commonly used for riding and transporting loading goods. The camel, the ship of desert, is an important animal in desert/sandy areas for transportation. Wool and hair is a by-product of the livestock industry. The type of wool is coarse which is used in the carpet industry and hair of goats and camels are used locally in cottage

industry for preparation of different household articles i.e. warm clothes and ropes.

The blood of livestock collected from slaughtered houses and is used for poultry feed industry. It is also important that the farmers increase the heads of livestock to enhance their income by selling their product in the market to meet expenses of their daily consumption and in hour of need i.e. debts and medical treatment and special occasions such as marriages, family members' deaths, natural calamities, sudden incidents and accidents, cultural and traditional events and other village festivals. It is the general observation that still the rural population get 70% of their work done by animals such as buffaloes, bullocks, horses, mules, camels, asses etc. The pair of bullocks is necessary for farming due to limited use of machines i.e. like tractors and other equipment for cultivation. There is very little use of tractors, according to Pakistan Agricultural Census 2000, on page: #. 283, farms reporting work animal in Sindh is 26% and in Punjab 19%. According to the above data, in cattle population, the share of Sindh comes to 21% i.e., buffaloes 7%, sheep 12%, goats 16%, camels 8%, horses 14%, asses 10%.

The other data set on Sindh's live stocks shows large variations in the number of livestock population during census of 1986, 1990, 1996 and 2000. The data of 1990 shows negative growth in livestock sector. In 1996, further increase has been observed. Once again, the data of 2000 shows the decline in population performance in livestock, which indicates that only the cattle number reduction has been measured at 3946 (thousands) in the year of 2000 as compared to 5464 (thousands) in the year of 1996 as shown in table 1.

The data of livestock population of Sindh by district indicates also in table 2 that there is a great potential for livestock production in the rangelands area of Tharparkar and

Tele:

E-mail addresses: hk.tagar@gmail.com

© 2012 Elixir All rights reserved

Kohistan hilly areas. That is why; in plain areas due to easy accessibility/availability of Indus water through canals leaves the growers no option but crop production.

The district wise figures of livestock population further shows that Tharparkar enjoys a leading position in the cattle, sheep, goats, camels, horses and asses except buffaloes and mules. It is also interesting that after Tharparkar some western parts of hilly areas of Thatta, Karachi, Dadu, Larkana and Jacobabad offer excellent potential for livestock population as shown in table 2. It is to conclude on the basis of above mentioned districts data, the Sindh province mainly rely for livestock produce on two regions, one Thar desert area including eastern side of Sanghar, Khairpur, Sukkur and Ghotki area and two western side hilly area of Mahal Kohistan including Thatta, Karachi, Dadu, Larkana and Jacobabad.

The above mentioned fluctuation in the growth of livestock in Sindh is not caused by any single factor but there are several obstacles which affect the growth and development of this sector. Drought situation in arid zones severely affects it (mentioned below in detail). In the detailed analysis of obstacles towards the development of livestock sector, we find that drought situation, migration of livestock due to drought situation, traditional methods of breeding, scarcity of feed, animal health problems, inadequate marketing and infrastructure facilities, institutional mismanagement, environment and cultural situations of the region make up major obstacles and are need to discussed below in detail and also to provide issues based solution in shape of feasible option for further development of the sector that is most important than agriculture towards its contributions. The study sum ups all the obstacles in the way of livestock sector development and also provides feasible options in details.

Material & methods:

The descriptive analysis method has been used in the study including findings of specific group of the livestock's owners conducted in different cropping zones of the region. The insights from my PhD thesis "Major Obstacles in Agriculture Development of Sindh and their Remedies" are also widely included in the study. The data of live stock census and development statistics of Sindh are used to support the hypothesis. Authors are practically associated with cultivation and cattle farming in central cropping zone of Sindh District Naushahro Feroze, so that their personal observations are also strengthen the hypothesis.

Discussions & Result

Livestock Farming in Irrigated Cropping Zone:

Culturally, Sindh has been dominated by feudal culture. In this culture, the poor masses of rural areas keep/rear the cattle for their daily consumption and the feudal class keeps the animals as a hobby or socio economic power in the rural society. That is why; the livestock sector has not been organized/developed commercially. So livestock development is a great challenge and it requires a change of attitudes towards this important sector of the economy. In rural areas, the sale of milk and other dairy products is considered to be a bad omen. There are many obstacles, we have observed in the field with the help of specific group of livestock owners and personal observation. In central plain areas irrigated by canal irrigation system, the settled livestock production system is established in permanent settlements like villages and towns where water and other amenities of life are continuously available throughout the year. The system of cattle, buffaloes, sheep and goat production in

plain areas, which depends on major and minor crops, is different from arid zones. The farmer lives in above areas where he holds his small piece of land and he keeps cattle and buffaloes for his own consumption and for little commercial activity of dairy products. It is subsidiary to crop production system. The herds/flocks are taken to graze in the morning and brought back in the evening in the same locality, this practice continues through out the year. The animals are grouped under the one management system of household flock or heard. A family possessing enough number of domestic animals enjoys respectable social status and is economically/financially prosperous/sound. The finding about agricultural sector of Sindh provides sufficient evidence that share cropping system dominates in land tenure system of Sindh. Therefore, a majority of rural people work as share cropper on large tracts of feudalist land. In old days, they kept a pair of bullocks to plough their land and other agricultural activities, but increasing mechanization, i.e. tractors, thresher and tube wells lead to poor interest in cattle farming due to decreasing importance of animal power. In other ways, landlords discourage the share croppers to keep the animals on their farms for developing more interest in crop activity than livestock breeding and increasing need of fodder for animals from their lands. In the interior of Sindh, due to deteriorating law and order situation, domestic animal theft, kidnapping of animals for ransoms due to old enmities and increasing criminals gangs, sow fear among livestock owners leading them to reduce their interest in the development of livestock and to switch to other economic activities in the rural areas.

Traditional Methods of Livestock Breeding:

The breeding of livestock is not a well managed activity in Sindh. The valuable genetic potential is being wasted due to indiscriminate breeding of livestock breeds under a system of underfeeding and malnutrition due to much attention to minor and major crops. Traditional livestock breeding systems/techniques are in practice for ages. Artificial insemination or other modern techniques of breeding are not introduced to the livestock holder. The selection of pairs is done by natural availability of male animals without giving due importance to more productivity and growth. The livestock holders who own few dozens of cattle keep their own breeding males. The owners of few cattle use breeding males from big owners, free of cost. Due to constant inbreeding, the vigor and physical strength of the stock is on constant decline. The height and body structure of breeds is diminishing with increasing inbreeding. The female animals are ignorant of benefits of out-crossing which is not done. However, if some selection for good males is done at all, it is carried out on the physical characteristics not on production characteristics. Selection of breeding males and females is not done on the milk yield of the mothers, as record keeping is out of question. The breeding season commences during monsoon, when feed is abundantly available.

Livestock Feeding:

The fodder of minor and major crops like sugarcane, wheat, Jawar, Bajra, shrubs, trees, various kinds of gross forest byproducts fulfill the feeding needs of the livestock in irrigated zones or cropping area. State lands especially rangelands of Thar and Kohistan areas rangelands provide most of the forage for livestock feeding in the arid zone. The availability of vegetation is in abundance during rains. The dry stock of various kinds of grass is stored and given to the animals during the period of

scarcity which falls during January to June every year before monsoon rains. Two types of feed scarcity periods are common. Firstly, annual feed scarcity period which continues from March to the time till the monsoon rains approach in July-August. During the post monsoon period, vegetation totally dries off and water reservoirs also become exhausted. Secondly, during the rainless year, there prevails feed scarcity for the whole year. During these two periods, the livestock and the pastoralists suffer a lot of losses in feed and production like hunger malnutrition loss of weight, loss of fertility, loss of milk production, loss of meat production and are affected by various kinds of diseases concerned with feed problems.

Animal Health:

The first network of veterinary hospitals, dispensaries and veterinary health centers was established in Sindh during the British era (1843-1947). These institutions/centers look after the health of all species of domestic animals. The government of Sindh has established a separate animal husbandry department in the recent past for the health improvement of the animals in the region, under the administrative control of livestock department of provincial government with its main office in Hyderabad, Sindh. The primary responsibility of the department of animal husbandry is to provide treatment to sick animals and carry out prophylaxis and breed improvement work. The department has huge infrastructure for carrying out work of veterinary care and animal production. According to government statistics, there are 119 hospitals, 60 dispensaries and 608 centers working for the prosperity of livestock sector and these centers vaccinate, treat and castrate millions of animals in the region. The central diagnostic laboratory is also working for disease diagnosis and serological surveys in the province but all of these efforts have not succeeded in inspiring the cattle owners. Another side livestock's owner complains that inadequate veterinary health cover is a limiting factor in the development of livestock in the region. The number of veterinary dispensaries and hospitals is inadequate and there is short supply of medicines and vaccines. Consequently, less than 30% of animals are vaccinated in routine. However, during certain years, a mass vaccination program is launched in which greater number of animals is vaccinated. The department performance is not satisfactory towards livestock development/health, programmed targeting and promotion and extension of livestock production. According to them, proper attention has not been given to empirical research, aimed at generating appropriate husbandry and management technological packages to livestock farmers through the use of suitable and efficient livestock extension messages. The livestock owners also complain that the data of public sector organizations is only on paper. That is why; they do not rely on figures provided by the government towards animal health. They believe that improper planning; ghost employees of animal husbandry departments, corruption, improper utilization of public sector and donor agencies funds are the major obstacles in the development of livestock sector concerned with animal health and improvement programs. They argue strongly that the public sector institutions regarding animal health are fully functional on paper only not more empirically involved in any development activity for animals.

Institutional Mismanagement:

As a sub-sector of agricultural economy, the livestock sector is particularly neglected by provincial and federal policy planners. Proper attention has not been given to livestock sector by policy makers and other institutions responsible for the

development of livestock sector of the region. Preference to crop-production over livestock production has led to its dismal performance. The Sindh province boasts of fine cattle, sheep, goat, mules, buffaloes, horses and camel breeds. According to World Trade Organization (WTO), Sindh / Pakistan has great potential to compete in dairy produce during the coming era of free trade, but there is a general lack of awareness about the merits and demerits of the breeds, and economic benefits of improving the sector. The livestock department of Sindh / Pakistan had the mandate to manage and improve performance of livestock sector through formulations and implementations of appropriate policies. Agriculture and livestock departments have not been able to frame policies due to two common reasons .i.e. lack of funds and lack of committed professionals. The work carried on the crossbreeding of animals has not proved very successful so far. Similarly, experimental work carried on crossbreeding has not made any impact in private sector as packages for transfer of technologies have not been developed. No appropriate policies at both national and provincial level have been framed regarding livestock development and feed resources during the periods of feed and fodder scarcity. At institutional level, the government of Sindh with the co-operation of federal government, a livestock experiment station and the sheep development station have been established at Nabisar road, district Mirpurkhas for improvement of productive and reproductive traits of Tharparkar cattle and sheep breed from Tharparkar district. The livestock experiment station Tando Muhammad Khan is also working for the improvement of cattle breed. The station is carrying out research on the improvement of productive and reproductive traits of red Sindhi cattle breed. The livestock Experiment Station Karachi is also working on the improvement and development of Red Sindhi cattle breed on the similar lines on which the Livestock Experiment Station at Tando Muhammad Khan is working for improvement of genetic resources. The livestock department of Sindh Agricultural University Tandojam is also working on various research projects for the growth and development of this sector, but all of above institutions have not been able to bring major changes in this sector because these are working on old traditional patterns with lack of skilled human force, scarcity of funds and long term vision.

Drought Impact on Livestock's Development:

As we have mentioned above with the help of current data of table 1 and 2 that there is great livestock potential in the rangeland areas like desert area of Thar region in eastern side and hilly areas of Mahal Kohistan in western side of Sindh; but when the drought situation rears its ugly head in the above areas, it severely affects livestock growth in these area and also leads to great variations in the overall performance of Sindh livestock sector. When above mentioned areas receive high rain fall especially in monsoon season, it leads to high growth in the livestock sector of Sindh. But during less rainfall year, drought situation usually creates unseen obstacles in growth and development of livestock and also affects overall performance of the sector across the province. According to local experience; a year of famine is expected once after 5-8 years, and a year of scarcity once in three years. During these conditions, heavy losses in livestock population are caused by acute shortage of feed, and livestock owners are forced to migrate along with their livestock. Most of them migrate to adjacent irrigated areas from arid zones. So it is to conclude that the system of livestock production in rangelands is migratory system of production. The

migrants work as farm labour and get wages for harvesting wheat straw for their feeding. By the end of June, they return to their abodes and stay there till monsoon rains. The second type of migration is highly mass migration, which is commuted during period of acute drought years, due to complete absence of the monsoon rains. It has also been observed keenly that by the end of winter season however, the pastures are exhausted and about 25 – 35 percent of the breeders of Thar and 40-60 percent of those of Kohistan move in February to the adjoining canal irrigated districts. In these areas grazing is provided for feed of animals by road verges, water channels, after harvest, cotton crops after picking, and acacia lopping. Some grazing is free and some is on payment. After monsoon rains, the pastures become available up to the end of February or beginning or continue till March depending upon the frequency and quantum of the monsoon rains and their pattern. From March till the approach of monsoon season, the inhabitants of these areas have no work to earn subsistence and no more grazing is available to the livestock for feeding. Some portions of population i.e. a few members of each village, along with their livestock migrate to adjoining irrigated areas of central farm land. This migration from both the arid / desert and mountainous areas coincides with the time of harvesting of wheat. It is also concluded with great concern that during migration process, livestock produce suffers from the loss of energy/quality time and money which is roughly estimated in multi billions of rupees and the animals lose their weight due to excessive stress and become too weak to walk and most of them die on the way due to under feeding/ starvation. Hunger and low quality of water subject the livestock to various diseases and lead to high mortality among the livestock as shown in table 3. This table 3 bears witness to our assumptions about irreparable loss of livestock sector growth in above areas and shows that 3 million livestock was affected in Tharparkar district, 01 million in Umarmkot during drought situation of 2000. In Mahal Kohistan, 1 million livestock was affected in hilly areas of Dadu district alone. The total five million animals were affected during above period.

Marketing, Infrastructure and Salvation of Animals:

The Sindh region especially the areas of Thar and Kohistan which offer excellent potential for livestock do not have a well developed marketing system of livestock. The areas mostly lack infrastructure facilities from farm to urban market. The road net work is either dismal or absent in the areas where livestock raising is concentrated. Most people are pedestrian travel by animals that is by bullocks, camels or by horses. However, recently roads have been constructed roads in rural areas but scarcity of transport still persists. The owners sell their livestock for immediate cash needs or in food shortage season. Marketing system is not centralized and livestock products travel and create contacts with local agents on individual basis and bargain over the prices and collect the produce at very low prices because there is inadequate competition, occasionally, the buyer visits villages and pays a price of an animal and takes the animal away. Otherwise, it is a common practice that owners take their animals to the nearest livestock markets locally known as 'Malpiris' and sell their animals. Livestock is sold throughout the year but during the periods of drought or other calamities, there is large sale of animals. Most of the young male animals are sold at the young age, but females are kept for future herd replacement. The livestock markets are not well organized in all ways and lack many facilities. There is a lack of marketing information for livestock holders that is why, supply and

demand sides are not closely watched out. Therefore, animals are sold and bought at negotiated prices per animal, rather than by weight or grade. The feeding scarcity during the various periods of time affects the animals, damages their health and increases the rate of mortality of animals and the livestock owners suffer huge economic losses and above loss leads them further to in vicious circle of poverty, forces them to live below the poverty line permanently and weakens their bargaining power that's why they sell their animals on free land especially they sell recently born animals for salvation. The same practice has been done during natural calamities; illness of family members, marriages and deaths among communities, religious and social occasions and that practice affects heavily the development process of livestock sector and related communities.

Findings of the study:

- The study of livestock concludes that the Sindh province greatly depends for livestock on two agro ecological regions i.e. desert areas of Thar and hilly areas of Kohistan but this sector has always remained neglected by the policy makers due to lack of proper planning, data collection and ill found development polices despite its vast potential.
- The drought impact in above regions is high as compared to central cropping region, during drought situation; 5 million animals were affected in above mentioned areas in one year alone.
- Little attention has been paid in the past to livestock sector and it is counted as supplementary income sector in Sindh.
- The opportunity cost of the labour and fodder is very high in livestock breeding as compared to farming in central cropping zone.
- Due to dominant sharecropping system in central zone, the landlords discourage cattle farming of tenants. That is why, the male are engaged in crops and the womenfolk look after animals plus their household activities.

Conclusions and Policy Recommendations

The livestock contribution is more dynamic than cropping share in GDP. So, the policy makers should focus the above mentioned desert and hilly zones for dairy produce rather than central cropping zone. It is worth mentioning here that the inadequate animal health facilities, institutional mismanagement old traditional methods of livestock breeding, feed scarcity, inadequate marketing and infrastructure services, constraints in export marketing, creeping role of middlemen and sale / sale and slaughtering of young calves during poverty, natural calamities and other religious and socio cultural occasions affect the growth of livestock sector. This study concludes that there is no proper research and documentation of the sector for further development and suggest following recommendations.

- The animal research and development centers should be established, much attention should be given to animal health services and other infrastructural and marketing development schemes.
- The irrigated cropping zones of central Sindh suit buffaloes and cattle farming so that the animal farming should be encouraged in these areas by implementing land reforms with great force that leads to ownership rights of share croppers.
- The problem of animal nutrition during the periods of feed scarcity could easily be solved through manufacturing of briquettes. In rangeland areas of Thar and Kohistan appropriate forage, trees, shrubs, herbicides and various kinds of grass

conservation methods will increase feed supply in above regions and reduce the rate of mortality in drought season.

- The breed may be improved through crossbreeding and best quality breed should be treated separately for more production. The crossbreeding has resulted in crossbreds with higher live weight at marketable age. The quality and quantity of wool has also been increased to some extent.

- The primary responsibility of department of animal husbandry is to provide treatment to sick animals and carry out prophylaxis and breeding improvement work. The department should consider livestock development programs, targeting and promotion and extension of livestock production on rangeland. It should initiate adaptive research program, aiming at generating appropriate husbandry and management technological packages to be disseminated to range livestock farmers through the use of suitable and efficient livestock extension messages.

- The network of veterinary hospitals, dispensaries and veterinary health centers should be equipped with state of the art tools, equipments and professionals. These institutions should be established at village level in arid regions. The mobile diagnostic laboratory should be introduced for disease diagnosis and serological surveys of the animals in the province especially in the arid zones.

- The utilization of appropriate allocations and performance of animal husbandry officials should be monitored with cooperation of community based organization (CBOs) and non government organization (NGOs). Protection of animals against diseases is necessary to save animal owners, traders and national economy from losses.

Pakistan Government of (2010-11), *Economic Survey of Pakistan*. Islamabad, Ministry of Finance & Economic Affairs Division. pp.14

- The livestock markets locally known as (Malpiris) should be reorganized on modern lines, physical infrastructure should be improved especially construction of farm to market roads that will lead to reduce the gape between livestock owners and consumers.

- The communication links between Karachi and Tharparkar may bring about great change particularly in marketing system.

- Institutional arrangements should be made by public / private sector organizations to help livestock owners during natural calamities, drought situations, seasonal feed scarcity period, poverty and other socio economic and religious festivals. It will increase bargaining power of livestock owners and in this way, we can save them from the role of commission agents when they buy their animals at throwaway prices.

- The policy makes have a good example to follow or a lesson to be learnt from the case study of Australia and our neighbor India towards economic development through livestock sector production where per animal production of milk and beef is threefold as compared to Pakistan. In India, Amull Gujarati case of farmers cooperative is too impressive in milk production and prosperity of livestock owners. Following the above two examples successfully, we will able to meet about 5% ever increasing annual demand of milk, meat, butter and other livestock products for domestic consumptions.

- The insurance industry of the country has also great opportunities in this sector for their business growth, and it may also reduce the risk factor of live stock owners and increase their assets for prosperous future. If due attention is paid, the region can fulfill local demands and become big exporter of dairy products in shortest possible period and may set healthy trends in economy in shortest period.

References

Development Statistics Sindh 2006, Bureau of Statistics Planning and Development Department, Government of Sindh Karachi, pp.133-136

Hamzo khan Tagar “*Major obstacles in agricultural development of Sindh and their remedies: a case study of Sindh*” Ph.D dissertation submitted to department of Economics University of Karachi. (Unpublished, 2009, page 99-109)

Sindh Drought Report 2000-2001: Office of the Relief commissioner Sindh, Board of Revenue, Government of Sindh Hyderabad, pp.5

akistan Government of (2003), *Agricultural Census 2000 Country Report*. Lahore Statistics Division, Agricultural Census Organization. Vol. I, pp. 283

TABLE: 1
NUMBER OF LIVESTOCK IN SINDH, 1986, 1990, 1996 & 2000 (CENSUS)
(In "000")

TYPE	1986	1990	1996	2000
Cattle	3,874	2,792	5,464	3,946
Buffaloes	3,220	2,566	5,615	4,222
Sheep	2,616	1,194	3,710	2,220
Goats	6,755	4,618	9,734	8,913
Poultry	8,799	..	11,861	..
Camels	218	140	225	261
Horses	76	30	63	49
Mules	5	4	12	10
Asses	500	302	694	533

Source: Development Statistics Sindh 2006, Bureau of Statistics Planning and Development Department, Government of Sindh Karachi, pp.133

Table 2

NUMBER OF LIVESTOCK BY DISTRICT IN SINDH,

2000 (CENSUS)

(In "000")

	Cattle	Buffaloes	Sheep	goats	Camels	Horses	Asses	Mules
SINDH	3,946	4,222	2,220	8,913	261	49	533	10
Hyderabad	176	384	78	543	2	4	24	2
Badin	173	283	83	306	3	..	8	..
Thatta	309	212	84	171	3	1	8	..
Dadu	298	274	126	614	37	3	31	1
Tharparkar	537	64	803	2,216	98	10	141	1
Sanghar	362	300	127	661	5	2	34	1
Sukkur	204	116	257	1,060	70	2	7	..
Khairpur	293	325	56	484	8	5	28	..
Nawabshah	185	258	34	430	4	4	17	2
N,Feroze	151	255	21	344	4	1	24	..
Shikarpur	86	158	35	22	1	1	9	..
Jacobabad	406	442	167	336	4	8	97	1
Ghotki	247	261	85	350	4	2	13	..
Mirpurkhas	347	229	148	1,076	16	3	23	1
Larkana	104	371	99	153	1	2	62	..
Karachi	68	290	17	147	1	1	7	1

Source: Development Statistics of Sindh 2006, Bureau of Statistics Planning and Development Department, Government of Sindh Karachi, pp. 135

Table: 3
drought affected areas in sindh (2000-2001)

THAR REGION District	Dehs	Villages	Population Affected	Livestock Affected
Tharparkar	159 (166)*	1895 (2085)**	0.89 (million)	3.00 (million)
Umarkot	25 (234)*	316 (1066)**	0.15 (million)	1.00 (million)
District	Dehs	Villages	Population Affected	Livestock Affected
Dadu	35 (525)*	453 (4420)**	0.26 (million)	1.00 (million)
Total	219	2664	1.30 (millions)	5.00 (million)

Note

*Total numbers of Dehs in the District.

**Total number of Villages in the District

Source: Sindh Drought Report 2000-2001: Office of the Relief commissioner Sindh, Board of Revenue, Government of Sindh Hyderabad, pp.5