



# LIVESTOCK CENSUS PUNJAB 2018

FIRST REAL TIME  
(DOOR TO DOOR)  
LIVESTOCK CENSUS



**LIVESTOCK & DAIRY DEVELOPMENT DEPARTMENT**

2-Bank Road, Old P&D Building, Punjab Civil Secretariat,  
Lahore, Pakistan.



تندرست جانور ہی ہماری صحت کے ضامن ہیں



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JUNE 7, 2018

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## ACKNOWLEDGMENT

Livestock Census 2018 has been a large exercise involving thousands of field staff of Livestock & Dairy Development Department Punjab: veterinary doctors, Para Vets, their supervisors and office staff including NQs, 45000 village livestock activists- all collectively made a formidable machine that materialized the task in such a seamless and professional way that simply warrants accolades. It was purely a team work in which each team member played its part to the utmost of dedication and devotion to the public service.

Farmers' associations, tanneries association, other trade bodies, academia, industry, dairy association, exporters, supply chain actors, retailers, veterinary professionals, shepherds, nomads, multilateral development partners and other stakeholders remain a source of guidance and inspiration to undertake such an exercise.

Acknowledgements are due to many mentors, friends, partners and colleagues of Livestock & Dairy Development Department Punjab, without the help of which this effort would never become so comprehensive.

Shortcomings, which may be many in any endeavour of this proportion, remain mine.

**Naseem Sadiq**  
**Secretary**

## PREFACE

Identification of a problem is first step towards solution of that problem. Problems exist: they grow, they perpetuate and diversify, they fizzle out to give way new set of issues. However, success lies in transforming challenges into opportunities.

Census is a very tedious exercise from any yardstick. It becomes more challenging when requirement of quality assurance encompasses simultaneous undertaking of social audit. Industrial handling of huge pieces of information (data sets) is not possible without electronic documentation. Appropriate set of algorithms involving highest level of artificial intelligence for data analytics should be an integral part of such an endeavour. Data interpretation is very tricky business. The more one explores data, the more one discovers one's ignorance. There is no limit to this discovery.

Livestock census was last conducted in 2006. It was basically sample survey. In the meantime, livestock population got accelerated projections by simple multiplication without taking into calculus actual situation on the ground. The same created a perception trap that led policy makers to take decision on the basis of data with no relevance to past, rendering it irrelevant for future as well.

Luckily, first Livestock & Dairy Development Policy of the Punjab in 2016, which was first since 1947 of any of Provinces of Pakistan, transformed the whole paradigm of sector development articulation. The policy envisaged collecting reliable data to design interventions for the actual and specific needs of stakeholders. That

led to the creation of ICT based 9211 Virtual Governance System to effect the envisaged transformation of the role of Provincial Livestock Department from 'disease attendant' to 'livestock asset manager' through morphing from curative to preventive side of livestock sector health management. Earlier in 2015 free mass vaccination, de-worming, transparent and merit-based assets' transfer to rural poor, quantification of each service and its real time social audit by sending an electronic receipt to each farmer through 9211 System, codification of all of 25,892 villages of the Punjab and electronic documentation of each delivered service along jurisdiction of each field staff with 360 degree viewable performance through user friendly executive dashboard helped break the organizational inertia on a pace that was not originally even imagined. This opening up and first actual exposure to situation on the ground made shocking revelations regarding the actual number of livestock versus projected figures.

Statistics from tanneries association, trade bodies, reckless use of growth hormone rBST for enhanced milk production (now got banned after long litigation) issues of unwholesome meat that surfaced some time ago dictated to move out of comfort zone above said perception trap created and institutionally document the reality in a structured fashion. Hence, the first real time door to door livestock census 2018 for the first time in history.

The data thus gathered shall go a long way in ameliorating the conditions of millions of hapless farmers besides generating national food security development narrative, helping policy makers even in wider sectors of economy to devise apposite set of interventions in preference to blind folded planning due to guesstimated projection.



### EXECUTIVE SUMMARY

This report is based on the results of Livestock Census Punjab 2018, which is first such massive exercise to collect door to door information regarding actual status of livestock from across all of 25,892 villages of the Punjab. More data analyses shall be made and shared in due course of time.

This report is arranged into five chapters. Backdrop and need for “Real-Time” door to door survey has been discussed in the first chapter under the heading of introduction. Methodology adopted has been detailed in the second chapter. Third chapter deals with the data sets that are compiled by the ICT based 9211 Virtual Governance System as a result of data entry by 9000 plus field staff along their respective jurisdictions, making each data entry traceable to basics. Earlier data was collected on hard forms which got authenticated from supervisors and community notables at village levels.

Conclusion is drawn on the basis of Census data and its comparison with meta data on livestock sector from other sources. Last chapter highlights silver lining that appears due to local strengths, better comprehension of issues- informed decision making, leading to interventions designed in the wake of first Livestock & Dairy Development Policy of the Punjab 2016. The results produced thereof are testimony of the fact that appropriate set of policies and initiative are well responded by the stakeholders if harnessed through local wisdom.

Last but not least, truth and noting else is only option towards deciphering mysteries of inclusive growth development.



## 1. INTRODUCTION

### 1.1. BACKGROUND

Pakistan has traditionally followed a “top-down” approach in its analysis of economic development i.e. there is no fashion to break up national GDP statistics into provincial and subnational units. Thus, many accounts of provincial GDPs have usually been projected estimates made by economists, based on the likely percentage of contribution of the respective province to the national GDP and some yearly studies. This led to a perception trap regarding both of productivity and production of livestock, rendering the development trajectory array off the mark. For instance, despite chiefly contributing (56.8%) in Agri GDP, livestock farmers could barely use less than 7% of the Agri credit annually (SBP Report 2010), showing the strategic loss this sector is bearing in the form of wastage of potential as reportedly 89% livestock farmers are landless and as such are not collateral worthy for the formal banking sector. They are thus lurking at subsistence level through ages and there has not been genesis of small to medium commercial farmer in the country.

### 1.2. LIVESTOCK CENSUS PUNJAB 2006

Last dedicated exercise of livestock census was undertaken in 2006 but that was not real time door to door survey and was sample census. However, results are plotted against recent Livestock Census 2018 hereinafter.

### 1.3. AGRICULTURE CENSUS PUNJAB 2010

Statistics from the Punjab Agriculture Census, 2010 are quite significant from this perspective of devising a strategy for the agriculture development as land holding size in the Punjab renders it relatively unfeasible for crops. Moreover, it reveals huge numbers (68.6%) of absentee land holders out of 90% less and up to than 12.5 acres' holders, which on one hand shows demographic transition (migration) from rural to urban side and on the other hand competing cost for agriculture labour market with urban markets with the resultant relative shrinking supply of labour in the rural areas, thus putting extra burden on the already fragile Agri ecosystem, historically witnessing price shocks. There is

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another very interesting, yet damaging dimension of this rural urban transition: urbanization of rural areas with drastic transformation of rural lifestyle. Use

**Total Agriculture Farmers: 5,249,800**

Acre	Total Farmers (000)	% of Total	Owners (000)	% of Total	Owners cum Tenants (000)	% of Total	Tenants (000)	% of Total
1.2	1237	43%	1152	23.5%	15.7	0.29%	69.6	1.32%
2.4	965	18%	846	16%	41	0.7%	78	1.5%
5	1144	22%	944	18%	93	1.7%	106	2%
7.5	792	15%	620	12%	88	1.6%	83	1.5%
12.5	619	11%	444	8%	98	1.8%	76	1.44%
Total	4747	90%	4006	76%	335	6.3%	412	7.86%

**Owners cum Tenants 7%**      **Tenants 8.6%**      **Absentee? 68.6%**

of sun light, the pivot of village life over millennia has given way to unhealthy and undesirable lifestyle, late awake, late sleep, a trend which needs to be reversed through a powerful national social narrative and conscious backing and promotion through all development plans, schemes, projects, and programmes.

Livestock is axiomatically the only rescuer in this backdrop that can additionally reverse the trend, which has the tremendous potential to climb the ladder of value addition as well, while ensuring food security. However, the livestock sector has been affected with some apparently inexplicable phenomena that were preventing the whole economy to gain socio-economic benefits of what could be attained through growth in livestock sector, having very strong dimensions along gender as well, as livestock sector is the largest women engagement in any economic activity; nutrition, school attendance and reduction in the relative poverty are other associated benefits.

## 1.4. ECONOMIC SURVEYS

According to an estimate (Burki, 2016) there is a deficit of 12.50 million liters per day in the country, which comes to 4.57 billion liters per annum and that is equal to 10% of (reportedly) total milk currently available for human consumption. To bridge the gap in milk consumption would require Rs. 275 billion per annum.

As per the Economic Surveys of Pakistan, the number of dairy animals in the country were 56.8 million in 2005 and 76.8 million in 2015. As per recent real time door to door Livestock Census Punjab 2018, 44.5% of 'standing herd' has



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been found in lactation. Same analogy has been juxtaposed on Economic Surveys of Pakistan of 2005, 2010, 2015, respectively, besides Livestock Census 2006, Agri Census Punjab 2010 to find out actual milk production and

Milk Production, Productivity & Per Capita Availability									
Pakistan (Economic Surveys 2005, 2010, 2015)									
Dairy Population Cattle + Buffalo (Millions) Economic Surveys		Dairy in Lactation (Millions)		Milk Production (Billions Lit.)	Human Population (Millions)	Lit/ Yr available for humans @ 63% of total Produced	Per day availability to Humans (Lit) @ 63% of produced by subtracting 37% for calf on the analogy of Pb Liv. Census 2018	Productivity Average/ Dairy animal/day (Lit)	Variable calculated as per production figures in Economic surveys
2005	56.8	25.3	14	38.37	156	155	0.424	6 (1516/ Yr)	
2010	67.3	30	16.5	44.82	177	159	0.437	5.9 (1494/ Yr)	
2015	76.8	30	16.5	50.88	191	167	0.459	6.8 ( 1696/ Yr)	
		Punjab @ 64.5% Pb Liv. Cen. 2018 For Punjab taken as 35% for Buffalo & Cattle- of national herd analogy averaged out	28	10.5	168	0.460			
Punjab (Livestock Census, 2006, Agri. Census 2010, Livestock real time/ door to door Census 2018)									
2006 (Liv. Cen)	29	12.9		17.73	87.5	128	0.349	5.5 (1375/ Yr)	Weighted average after rounding up for door to door & cattle Pb Liv. Cen. 2018
2010 (Agri. Cen.)	28.9	12.86		17.68	93.6	119	0.326	5.5 (1375/ Yr)	
2018 Livestock Cen. (9211)	Actual 29	12.9 (44.5% of herd)		17.73	110	101	0.278	5.5 (1375/ Yr)	

availability for human consumption in comparison of Livestock Census 2018. The outcome has been captured in the diagram below, which of course does not corroborate the production estimates from various sources. However, the most authentic figure may be the one with door to door survey which is true in the case of present Livestock Census 2018.

The period from 2005-15 clearly shows that the production of milk is stagnant on an average. This is exactly corroborated by a study of Prof. Abid Amin Burki 2015 which suggests the total factor productivity of subsistence level farmers stagnant during the corresponding period. An analysis on the basis of said study reveals that while TFP for subsistence level farmers is stagnant for the period 2005-15, corporate farms have been knocked out: they are 38% less competitive on a single factor of fodder as compared to subsistence level farmers, who constitute about 93% of the total farmers, out of which overwhelming majority is altogether landless. This finding is independently corroborated with statistics from Agriculture Department Punjab that indicate that area under fodder cultivation, in fact, went down during 2000-2010 period. Statistics from tanneries association regarding import of skins and hides, from industrial sector

for the import and export of wool are further substantiating the findings of Punjab Livestock Census 2018.

Another very interesting proposition that is historically suggested is that it is the lack of use of modern technology that is hampering growth of the livestock, particularly the dairy sector. In Pakistan, corporate farms used state of the art technology and high quality fodder for preparing livestock feed. But both subsistence and landless livestock farmers have performed better than corporate farms (Burki, 2016).

Surprisingly, in 2005, returns (excluding cost of family labour) to dairy farmers who were selling milk to milk processing industry were 32% more relative to farmers who were selling to informal milk collector. However, by 2015, the dairy farmers selling milk to milk processing industry were earning 12% less than others (Burki 2016), thus registering a loss of 44%. This phenomenon went hands in hand with ever increasing reckless liberal import of dry milk and whey powder, with latter being imported as animal grade food but used to make milk for human consumption, thus working as shock to production of milk from livestock. Resultantly, the procurement of milk has gone down by the processing industry, while the sale has gone up manifold.

In the very context, reducing the cost of production through bringing competitiveness and value addition, while focusing 89% livestock farmers, who were subsistence level, landless yet buoyant; but never focused before for development, were the only option left with the policy makers. But were we exposed to said factors that seem obvious now as per the above description due to the advantage of viewing things from the hindsight? In fact, the twisted reality that bred the misplaced development perception and projections thereof due to guesstimates was required to be corrected through a structured way.

Thus, credible “**REAL TIME**” data collection became imperative before even thinking to streamline the livestock and dairy sector in the country. That was how the Livestock Department Punjab erected state of the art ICT based 9211 System for real time data collection to induce the much needed strategic correct, which has culminated into largest live database of millions of livestock farmers across 25,892 villages of the Punjab Province with complete codification of each, besides capturing details of millions of their livestock and mapping of 434

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services, being delivered by the L&DD Department with maintaining of 360 degree viewable electronically retrievable record of each, accessible through a user friendly executive dashboard. Quality assurance of this collected data is being practiced with real time social audit by sending an SMS in Urdu font to the farmer whom a service is delivered by any filed staff of L&DD Department the moment filed staff uploads data comprising service delivery details. The SMS so sent carries information of toll free 24/ 7 call center number (08000-9211) for intimation in case if a service is not delivered to the farmer or details do not match with delivered service, which has created a credible deterrence to ensure conformity to the service delivery specs, resulting in low cost, yet high end database (PILDAT 2015).





## 2. METHODOLOGY ADOPTED

- 2.1. The superb prowess demonstrated by the 9211 Virtual Governance System that created largest live ICT based database of livestock farmers in the Punjab (starting from 2015) with accolades from across the world, besides extension/replication requests from other Provinces, AJK, FATA, ICT, and GB, directly to Livestock Department Punjab, through FAO, and also through the Federal Government encouraged the Livestock Department, Punjab to venture upon “Real-Time Livestock Census” through an exhaustive door to door exercise of data collection, verification, processing, and sharing. Previously, mass vaccination of animals for the first time in history conducted in the Punjab in early 2015, mapping of diseases, mineral deficiencies and that of migratory trends were completed along with tracking of huge transaction of animals within a short span of two weeks towards proximity of Eid-ul-Izha, were chief contributing factors forcing the department to have ‘Real-Time’ livestock Census as no solo flight for uplift of this sector would work. Moreover, it was observed that this very sector was sensitive to slightest changes in other sectors of economy domestically and internationally.
- 2.2. The main objective was to make available real time verified actual data on status of livestock and livestock farmers in the Punjab Province of Pakistan that could feed empirical evidence based decision support system for forward planning and development of the livestock sector. It was also envisaged to dispel the perception trap, exponential calculations of projected estimates kept on creating over several decades in the past that had led to worst possible outcome for national food security for which Punjab happened and also supposed to be major contributor.
- 2.3. It was a novel, yet bold idea to begin with door to door campaign which was impossible exactly three years ago. Luckily, in the wake of first Livestock & Dairy Development Policy of the Punjab, a complete Paradigm Shift from curative to preventive side of livestock health sector management had been effected by L&DD Department, after 2015 onward, that created from scratch a highly mobile paraphernalia of over 9000 medical kit mounted motorcycles, 347 mobile veterinary dispensaries, 44 mobile veterinary laboratories, 9 mobile veterinary training schools, digitally linking through ICT based 9211 Virtual Governance System a huge treasure trove of human resource (over

9000 Vets. & Para Vets) that got golden backed through thousands of rigorous training, grooming, serving exercises, resulting in earning of the public trust thereafter.

- 2.4. Field exposure through such a vast and dedicated machine that L&DD Department came into being in the wake of above mentioned Paradigm Shift from curative to preventive transpired very bleak picture regarding the actual number of animals in the field as compared to previous statistics. There was something radically missing somewhere. However, that something was so horrible that nobody was ready to rock the boat of perception trap that was exponentially growing in size (numbers of animals), based on mere estimates. Now department had an ICT based system that not only recorded each and every service delivered to each farmer and animal but also sent an electronic receipt in the form of an Urdu SMS for real time social audit. Misrepresentation or false entry with such an arrangement had rendered next to impossible as dedicated 24/ 7 call center was accessible through a toll free number (08000-9211) in case of any wrong claim of delivered service by any employee. This arrangement exposed that there were not sufficient number of animals in the field out there as should had been as per the claimed projections. District and region wise profile of different breeds were also found erratic. Were huge doses of vaccinations fake? What was the quality and quantity of biologics production? Whither exports as how the carcass weight which was being exported could match the restocking dynamics? Reports like World Bank's on Stunted growth in children in Pakistan , putting

ملک		پاکستان		ہندوستان		بنگلہ دیش		نیپال		میانمار		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت نام		کمبوڈیا		لائوس		ملائیشیا		سنگاپور		برونائی		اندونیشیا		پاپوا نیو گنی		فیلیپائن		ویت 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# LIVESTOCK CENSUS

FIRST REAL TIME (DOOR TO DOOR)  
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Hence, it was decided to launch a comprehensive door to door survey to find the truth howsoever ugly it might come.

2.5. Polio Plan was followed to run a door to door survey with all standard features like marking of doors and filling of specially, yet specifically designed survey forms for data collection in the hard form on the paper, signed, verified by supervisors right in the village and got double verified from village notables. Registration cards were placed with registered households.

2.6. After having satisfied from the veracity of entries on survey forms, each employee along its own jurisdiction uploaded data on to ICT based 9211 System by using its own mobile

phone through a specially designed software which integrated the entered data with already available database seamlessly yet instantly, thus creating a superb comparable livestock profiling of millions of farmers. Hence, by end of physical verification process, data has almost simultaneously captured electronically eliminating costly data entry exercise by suing computers or internet. 9211 System captures data right from the field through simple GSM network by using ordinary mobile phones and instantly creates a real time database that is 360 degree viewable along multiple angles, interventions and jurisdictions through an executive dashboard, available to thousands of



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employees and supervisors. Rest of Provinces and the Federal Government are also following the suit for which L&DD Department is providing free of cost software, in addition to technical support and training.



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## 3. LIVESTOCK CENSUS PUNJAB 2018

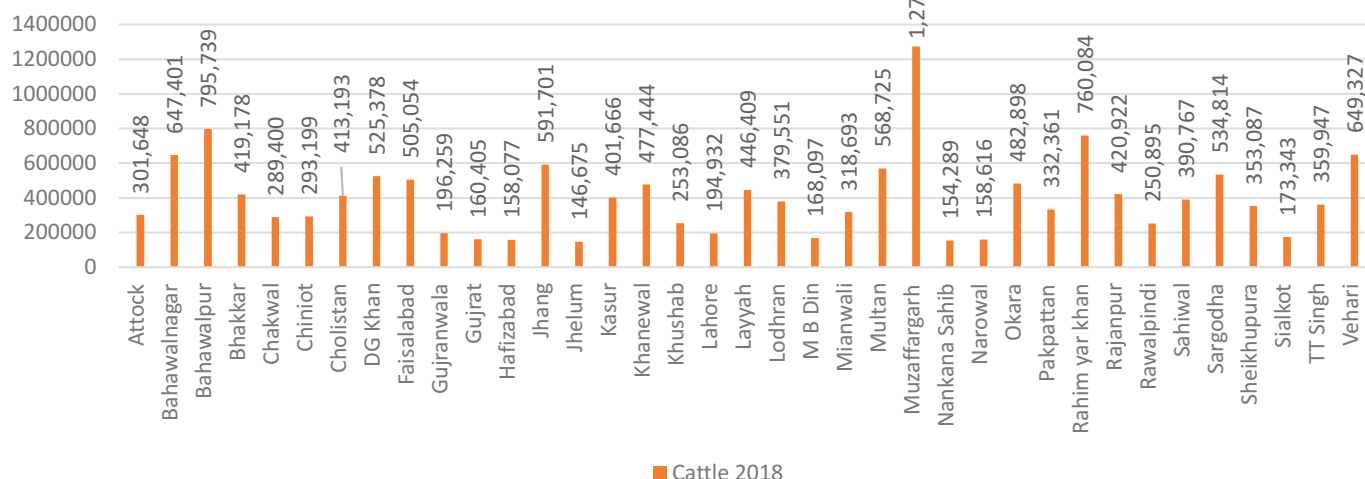
District	Registered Households	Cow	Buffalo	Sheep	Goat	Rural Poultry	Duck	Ostrich	Pigeon	Fancy Bird	Ostrich Chick	Camel	Camel Female	Donkey	Horse	Mule	Total
Attock	63,668	301,648	75,837	170,408	306,423	305,571	2,266	71	84,178	31,704	-	256	980	10,111	3,237	12	1,292,702
Bahawalnagar	138,535	647,401	616,831	143,055	677,310	337,925	2,106	2,007	164,512	30,326	1,916	141	540	22,464	714	245	2,647,493
Bahawalpur	105,258	795,739	370,569	216,868	738,923	310,248	2,800	59	266,937	68,010	4,759	357	721	9,708	8,871	173	2,794,742
Bhakkar	102,245	419,178	172,065	319,295	496,047	716,087	5,497	134	232,736	49,481	-	1,594	3,716	29,899	763	425	2,446,917
Chakwal	88,003	289,400	83,837	186,930	366,674	355,034	1,179	34	112,851	11,904	-	311	621	36,066	950	552	1,446,343
Chiniot	62,852	293,199	434,450	53,766	153,532	241,209	800	10	196,154	11,787	-	93	570	30,704	2,693	77	1,419,044
Cholistan	13,860	413,193	10,588	530,963	219,296	32,980	16	2	3,662	1,054	1,084	2,518	13,519	3,621	13	37	1,232,546
DG Khan	80,767	525,378	240,325	1,232,790	1,392,302	882,438	7,062	43	291,524	94,377	26	1,703	3,255	6,847	2,743	183	4,680,996
Faisalabad	192,382	505,054	968,983	43,548	532,263	416,144	8,398	239	377,757	43,122	101	145	542	33,473	3,425	942	2,934,136
Gujranwala	63,755	196,259	575,503	93,634	98,384	477,643	16,844	-	374,640	65,772	-	2	85	11,036	3,257	699	1,913,758
Gujrat	68,389	160,405	310,476	27,683	123,482	214,101	4,478	658	359,907	66,139	281	60	165	31,848	8,094	436	1,308,213
Hafizabad	45,727	158,077	337,772	23,958	70,331	245,750	4,297	-	119,886	19,560	-	3	20	17,305	1,604	252	998,815
Jhang	133,262	591,701	555,398	241,742	430,871	470,935	3,798	247	250,666	45,798	2,873	349	916	41,283	4,817	128	2,641,522
Jhelum	40,343	146,675	94,995	23,172	154,366	163,298	1,796	175	118,847	34,060	21	87	422	11,803	1,104	140	750,961
Kasur	96,677	401,666	591,823	71,797	249,524	190,484	9,026	1,976	130,523	31,530	5	27	45	18,683	1,579	971	1,699,659
Khanewal	93,934	477,444	410,319	96,730	482,699	336,603	2,262	-	164,277	31,486	-	13	73	6,484	4,262	46	2,012,698
Khushab	65,599	253,086	101,548	136,042	327,409	353,785	1,638	50	86,696	11,103	83	1,223	2,489	20,059	1,098	59	1,296,368
Lahore	34,563	194,932	370,307	35,435	72,147	131,996	3,898	50	273,926	77,795	15	5	32	6,975	6,280	180	1,173,973
LAYYAH	86,286	446,409	183,785	323,640	363,462	570,274	5,615	12	102,057	27,204	2	825	2,330	16,081	1,827	38	2,043,561
Lodhran	64,328	379,551	154,759	45,498	321,665	198,889	1,398	92	136,731	8,043	26	59	56	1,121	2,412	33	1,250,333
M B Din	59,087	168,097	465,481	14,356	93,583	190,071	3,603	2	118,990	21,051	3	26	60	30,941	3,203	884	1,110,351
Mianwali	77,440	318,693	112,295	234,103	350,991	552,431	5,007	510	115,110	8,981	1	598	1,288	12,969	4,649	62	1,717,688
MULTAN	89,051	568,725	341,931	99,221	521,043	382,942	1,980	222	202,036	124,070	60	78	162	3,158	211	15	2,245,854
Muzaffargarh	189,493	1,272,637	665,822	472,268	1,117,286	1,208,244	14,595	78	387,103	189,100	386	554	1,133	16,037	744	93	5,346,080
Nankana Sahib	48,467	154,289	300,971	25,169	123,748	134,691	3,236	134	104,796	22,398	-	12	49	12,830	1,166	613	884,102
Narowal	72,507	158,616	280,063	38,467	118,394	268,519	17,847	53	235,547	63,941	12	1	7	30,673	412	689	1,213,241
Okara	109,880	482,898	726,243	82,359	304,839	264,209	5,010	55	125,670	21,597	40	21	134	22,868	1,726	913	2,038,582
Pakpattan	87,736	332,361	474,996	37,440	253,613	176,443	1,984	49	77,117	16,808	-	21	83	16,158	2,981	589	1,390,643
RAHIM YAR KHAN	144,234	760,084	691,022	97,543	1,111,199	583,766	6,340	3,722	404,354	89,027	4,720	523	1,398	20,689	1,323	604	3,776,314
Rajapur	50,971	420,922	241,864	512,933	862,903	431,946	5,643	-	315,235	94,821	58	1,533	6,061	4,557	517	124	2,899,117
Rawalpindi	85,386	250,895	130,810	24,257	217,994	466,389	2,992	45	173,207	22,463	100	32	81	8,478	515	17	1,298,275
Sahiwal	89,273	390,767	577,142	54,465	402,819	228,445	2,154	307	120,493	29,722	104	47	198	19,123	2,082	543	1,828,411
Sargodha	142,605	534,814	584,877	110,670	346,002	663,335	3,261	9	306,933	63,733	2	220	554	69,210	4,190	804	2,688,614
Sheikhpura	72,047	353,087	492,339	80,674	142,931	408,024	18,425	184	217,076	95,881	75	12	115	19,561	2,347	1,201	1,831,932
Sialkot	66,796	173,343	447,143	49,994	80,949	264,330	10,077	506	340,096	40,076	14	-	4	21,617	2,315	644	1,431,108
TT Singh	108,869	359,947	398,652	31,632	394,022	247,770	3,258	22	159,642	49,216	25	64	173	17,035	3,740	302	1,665,500
Vehari	114,091	649,327	530,409	73,591	544,954	331,314	1,161	257	155,910	32,684	68	65	123	5,668	1,615	113	2,327,259
GRAND TOTAL	3,248,366	14,945,897	14,122,230	6,056,096	14,564,380	13,754,263	191,747	12,014	7,407,782	1,745,824	16,860	13,578	42,720	697,143	93,479	13,838	73,677,851

# LIVESTOCK CENSUS

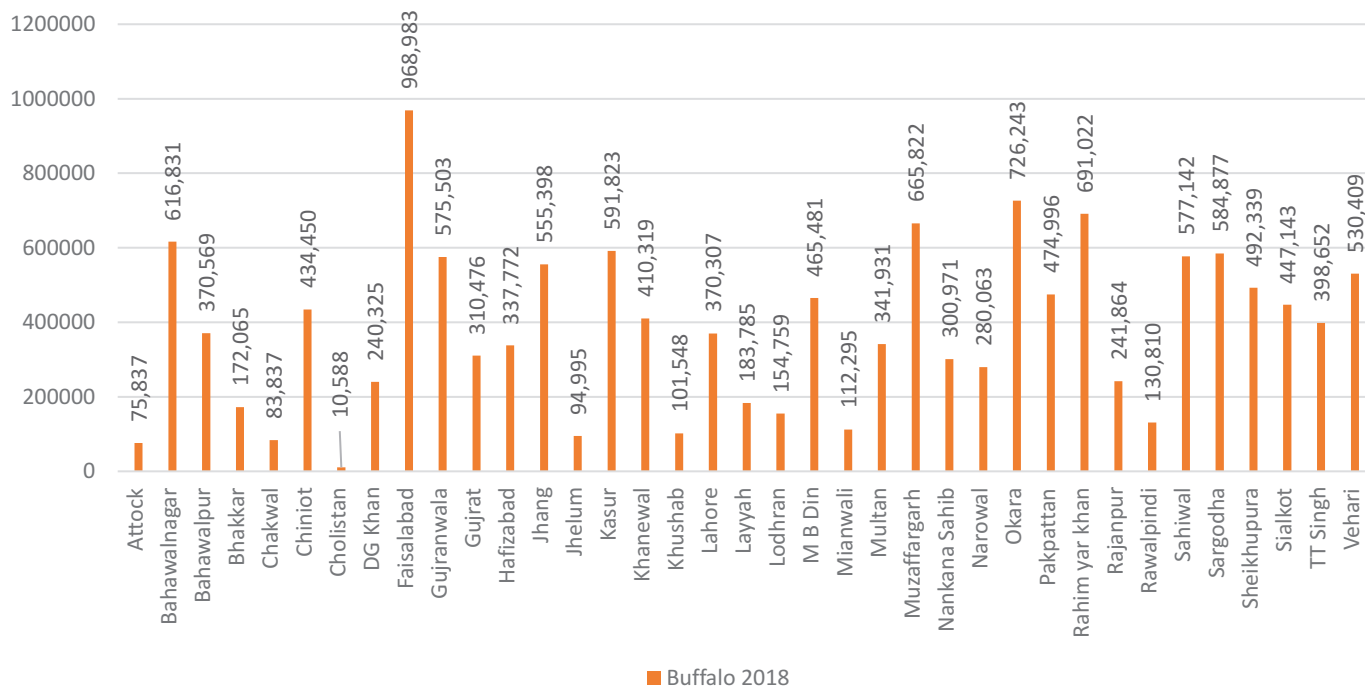
FIRST REAL TIME (DOOR TO DOOR)  
LIVESTOCK CENSUS

PUNJAB 2018

## DISTRICT WISE CATTLE



## DISTRICT WISE BUFFALO

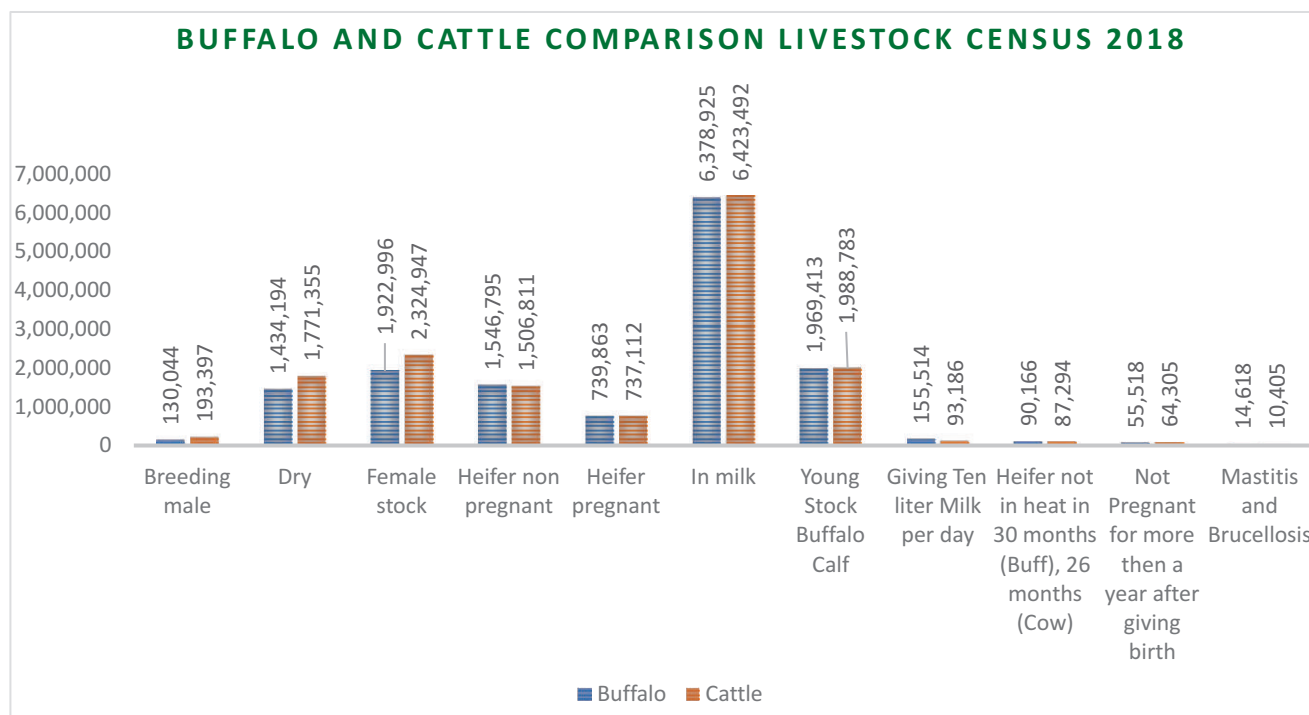




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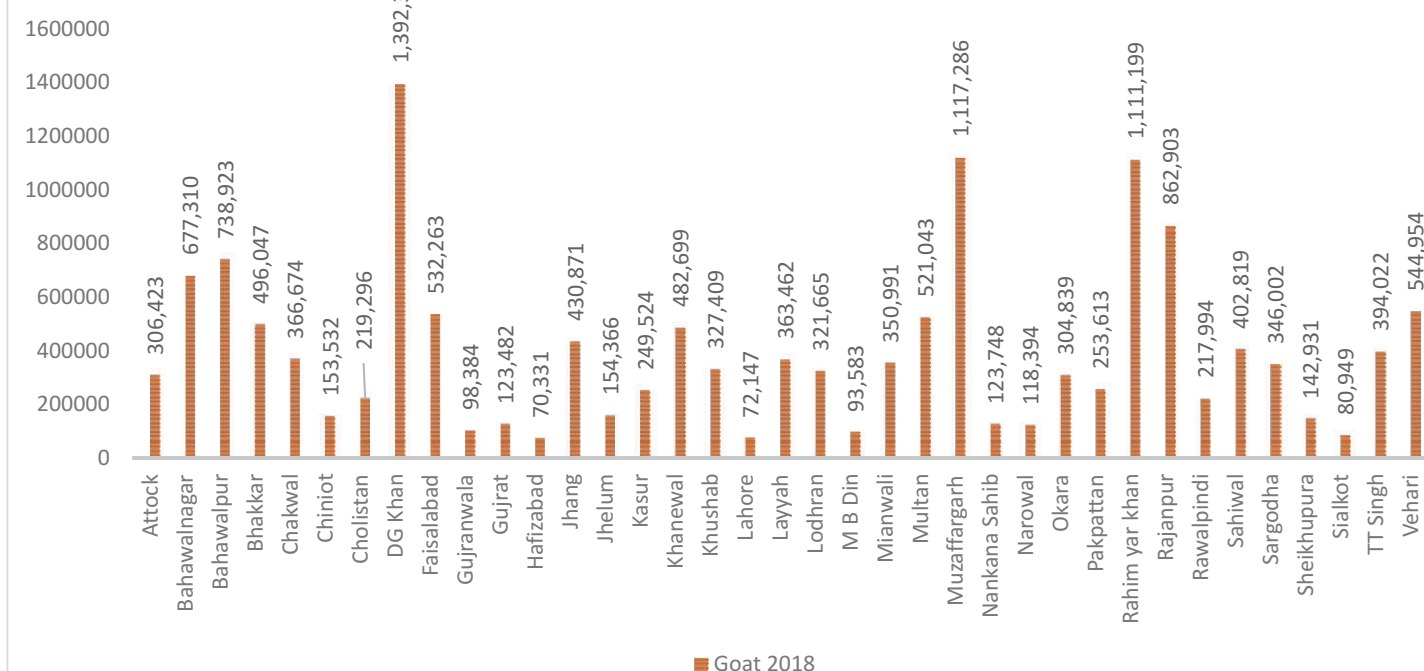
FIRST REAL TIME (DOOR TO DOOR)  
LIVESTOCK CENSUS

PUNJAB 2018



- To control the fast eroding best genetic potential, refurbishing and rehabilitation of dry animals, on average 125,000 per month taken from the Punjab to other parts of the country and used for meat purpose in their prime age once lactation is over, can quickly stabilize the situation for their recycling. The demand of the meat can be met from fattening of their male calves which used to be slaughtered in their infancy with extremely poor carcass yield and no value for their by-products.
- The emerging number of fattening farms in last two years is an encouraging sign that policy interventions are working well even assuring availability of surplus humped cattle to be exported. It will open new vistas for quality buffalo beef exports.
- Any planned increase in the animals would require exploring the best use of the crop residues especially that of the maize and rice in view of the scenario that in future sowing of wheat and sugarcane is likely to reduce. It further substantiates that through multi-cut the existing sugar cane can be used as a fodder crop.
- The use of rBST, indiscriminate breeding practices through uncertified semen / breeding males, poor quality biologics and spurious khal banola / feed stuff are the major factors which led to the reversal of production and reproduction, culminating into evaporation of best productive animal from the system. The scale of converting best milch animals into un wholesome meat kept on mounting on the other hand as only rBST infusion alone caused havoc to the premium producers at prime productive age. However, upon implementation of first livestock policy ingredients with matching interventions, the situation has improved visibly as the incidence of diseases like FMD, HS, Brucellosis and mastitis has reduced many folds with reduction in cost of production. Moreover, the productive and reproductive efficiency is also on climb due to planned breeding plan / policy.

### DISTRICT WISE GOAT

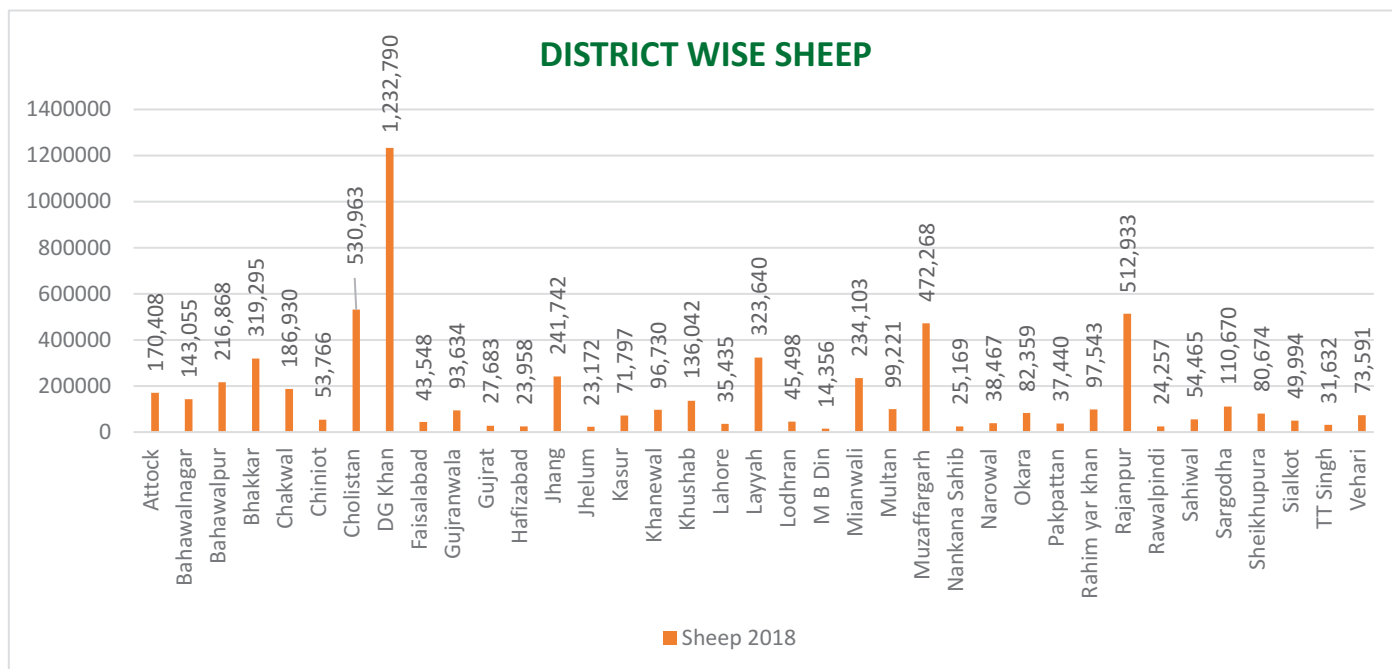


- The goat population has suffered shocks due to early female slaughtering, export of pre-mature animals, and non-maintenance of quality of rams/ bucks, besides poor breeding practices and observation of breeding seasons.
- To control the inbreeding, and improve the availability of breeding male, during the recommended breeding season, the project of the L&DD i.e. provision of breeding males has yielded its extra-ordinary positive results.
- Additionally screening of breeding ram/ bucks, provision of incentives and minerals have all contributed for this improved situation. However, a detailed study into the factors of radio-active metals and their impact on breeding prowess of reproduction in DG Khan and Rajanpur area on small and large ruminants needs to be undertaken.
- The areas of Khushab, Mianwali, Bhakkar, and Layyah are developing as a fattening industry where provision of credit may accelerate the process for economic dividends.

# LIVESTOCK CENSUS

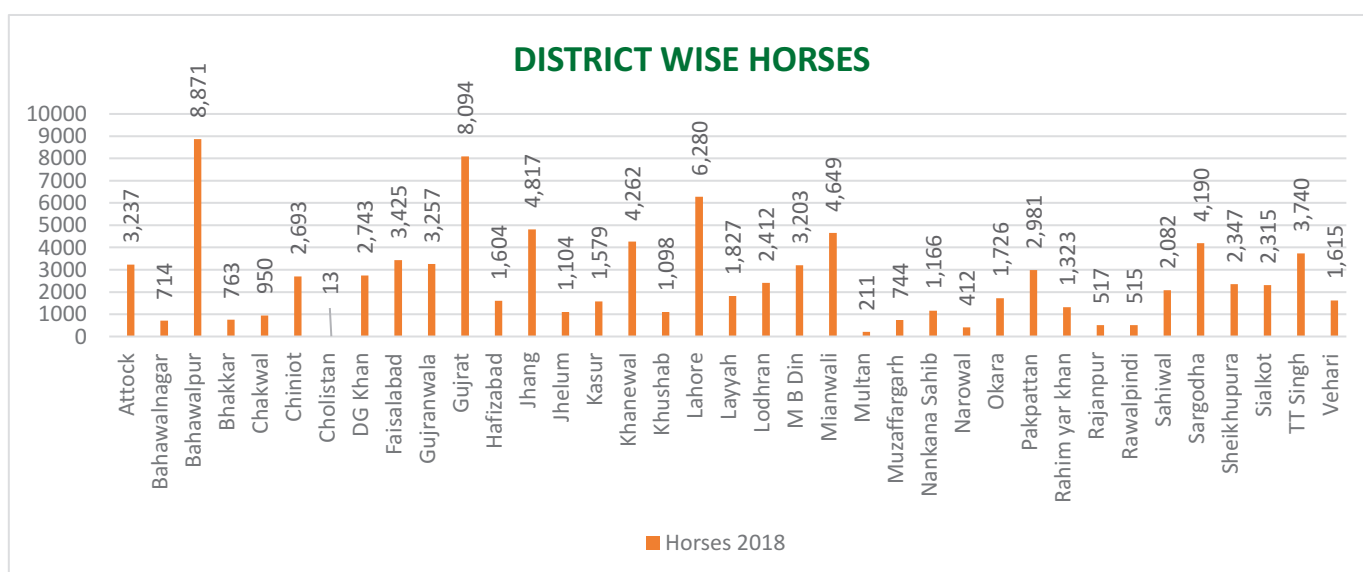
FIRST REAL TIME (DOOR TO DOOR)  
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PUNJAB 2018



The sheep population is dominant in DG Khan, Muzaffargarh and Rajan Pur District of the Punjab. In rest of the Punjab it is declining due to following factors:

- This animal for sacrificial purpose could not maintain its likeness;
- The collapse of hand made carpet industry and no demand of wool from India, cost of twice a year sharing with no return;
- The climate change and depleting range lands with no restocking is adding miseries to sheep rearing families.

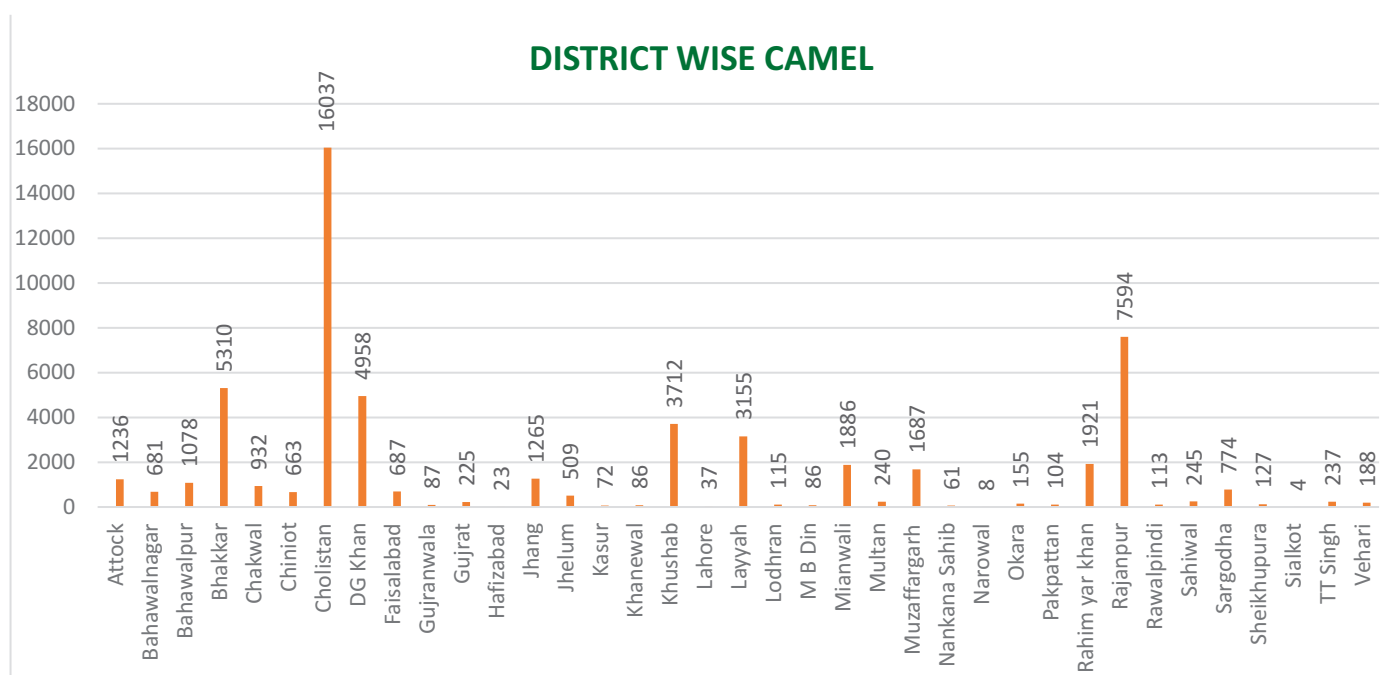




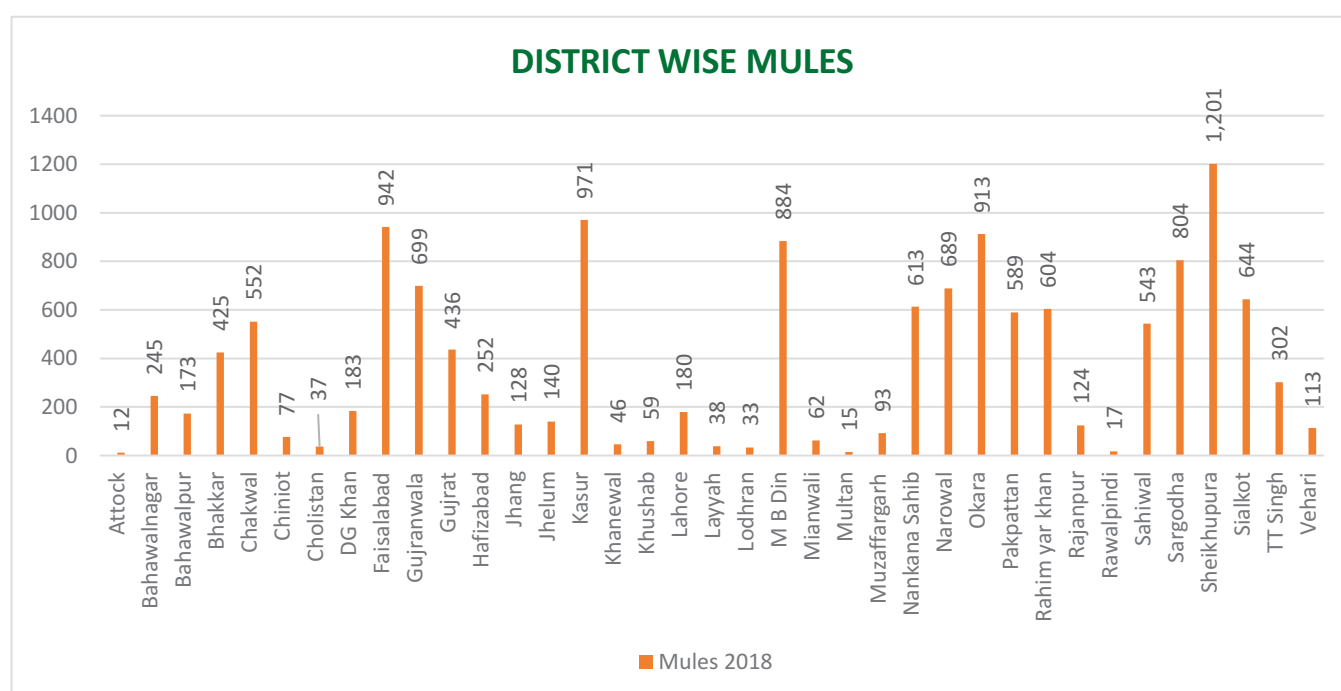
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PUNJAB 2018



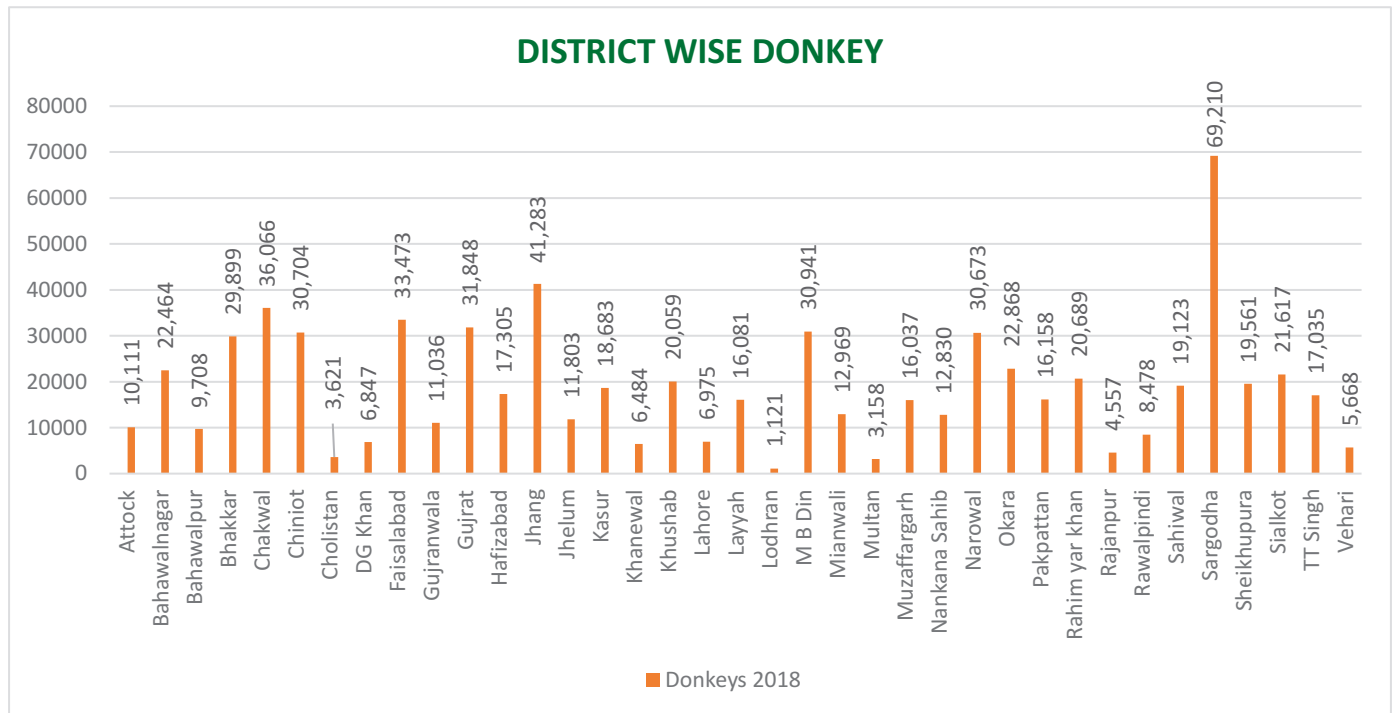
The census was conducted from February to May 2018, which is a period when the camel migrates to Sindh, Balochistan and KPK. Hence, these statistics are under-representative. These will be redone in the coming November when all animals will be retreated to their original habitat in their breeding season. The project launched for the improvement of camel includes comprehensive health coverage and mapping of its ecology. The introduction of organic camel milk and meat in cities like Lahore will be helpful in improving the economic conditions of camel rearing families.



# LIVESTOCK CENSUS

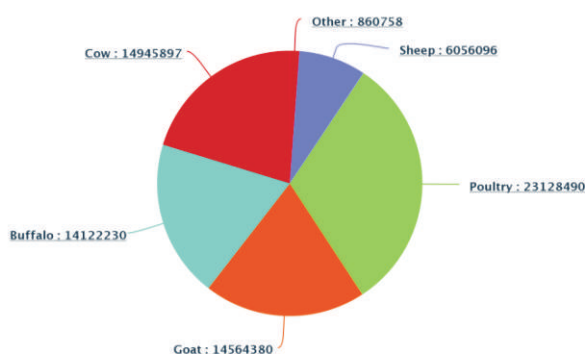
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PUNJAB 2018

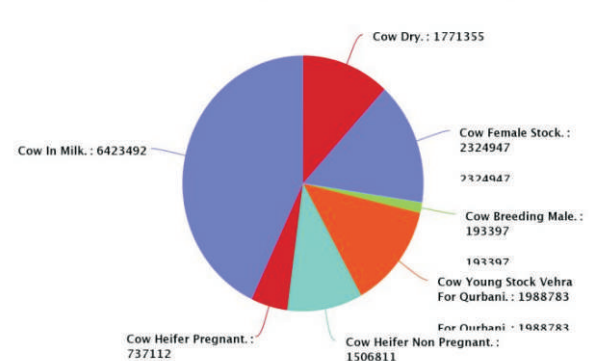


The introduction of Chingchi rickshaw has devalued the donkey as a draught animal but its importance in the rural areas, hilly areas and where mining is going on, cannot be underestimated. Its ill-fated slaughtering (3.2 lac skins recovered from Karachi recently), inbreeding, and ignoring this important animal by the policy makers requires an extra attention for its restoration as per national requirements, particularly in current scenario of CPEC. This animal need to be viewed in terms of its export potential to China for which its farming on commercial basis is required to be propagated. L&DD Department in collaboration with Brook and guidance from Mona Depot RV&FC, a project for improvement of donkey breed has been initiated.

**Census 2017-18 (Livestock = 73,677,851)**



**Census 2017-18 (Livestock = 73,677,851)**

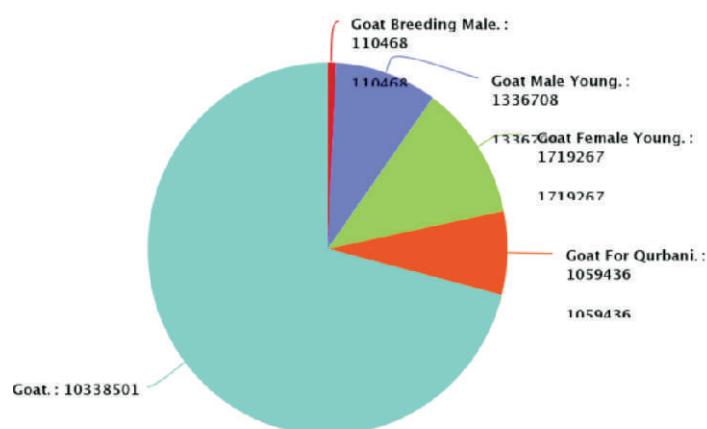


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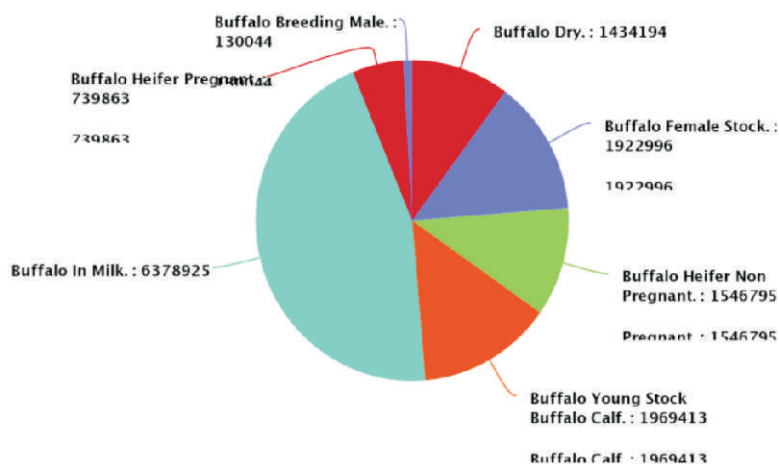
FIRST REAL TIME (DOOR TO DOOR)  
LIVESTOCK CENSUS

PUNJAB 2018

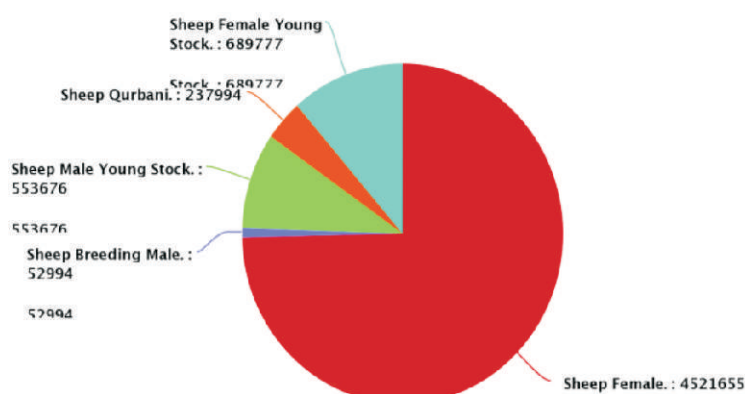
Census 2017-18 (Livestock = 73,677,851)



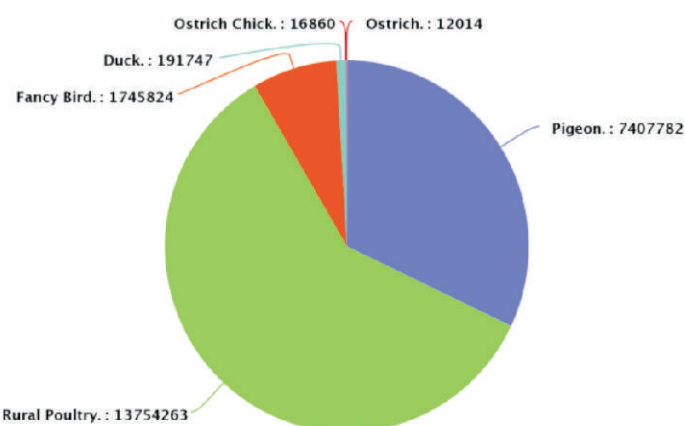
Census 2017-18 (Livestock = 73,677,851)



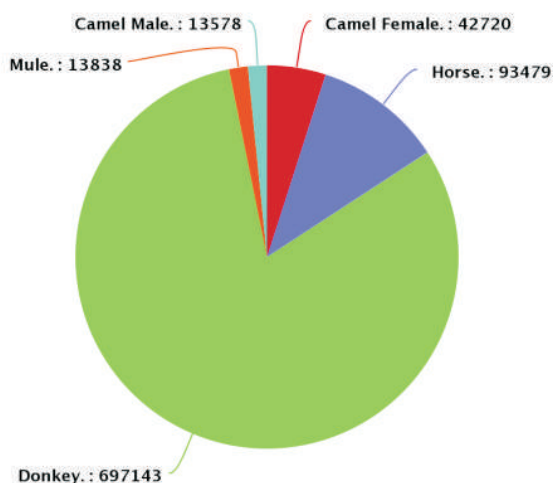
Census 2017-18 (Livestock = 73,677,851)



Census 2017-18 (Livestock = 73,677,851)



Census 2017-18 (Livestock = 73,677,851)



## NOTE

These cross sections of data are based on about 98% data uploaded on the 9211 System by field staff and these represent fair representation of overall data. Supplementary issues will be released after completion of 100% data entry. However, analyses are based on 100% data representation.



## 4. CONCLUSION

- 4.1. Statistical capacity is calculated as the average of the score of three dimensions of availability, collection and practice of data. Empirical evidence-based policy planning is impossible without lifting statistical capacity of organizations and countries beyond a certain level. Big data has now become the lynchpin in every aspect of organizational transformation for developing a given sector of the economy.
- 4.2. Agriculture sector contributes about 20% in national GDP, out of which share of livestock sub-sector is 58.3% as per latest Economic Survey of Pakistan. Share of crops has dropped to 37%. It consumes 46% direct labour force at national and 51% at Punjab level that in case of latter comes from 63.29% rural population. However, share of livestock sector in agriculture credit consumption is dismally low (7% SBP, 2010), as majority (about 89%) livestock farmers are landless and as such not collateral worthy for the formal banking sector, with 73% potential banking market still unbanked in Pakistan. This phenomenon is causing biblical loss to the economic development, which coupled with certain perception traps, regarding the actual number of livestock in the country, had led to strategy stasis perpetuating undesirable continuity of historical legacies like price capping on milk and meat that has led the farmer to cap livestock production to ward off its burgeoning losses. Farmers' income may be increased 40% in no time by removing price capping and creating vertical market linkages. For instance, for urban consumer quality pure milk is not available @ Rs. 100/ Kg, yet at farm gate in rural areas farmer is compelled to sell milk @ Rs. 34/ Kg. Whereas government-controlled rate is Rs 80 on an average. If Rs. 80/ Kg government retail rate is to be taken, Rs. 46/ Kg is being lost to the middleman now turning 'middleman producer' of 'chemical milk'. This price capping has induced farmer to cap its production of milk. It may be noted that livestock is kept for dairy purpose in the Punjab. A stagnant dairy production would axiomatically mean compromised meat production.
- 4.3. Although, production is static for the last about two decades, yet per capita availability is continuously going down due two cardinal factors: population

explosion and increasing share of services sector in the economy. For the latter Punjab is major contributor.

- 4.4. Calculated based on just one lit addition per animal per day, which is instantly possible within few hours for all animals in lactation on 'ad lib' provision of water and somewhat better feed and management, 3.2 billion litres of milk per year are possible, which will be 18% increase, coming to the tune of 320 billion rupees per year and Rs 102 per day per household (3 million households) or Rs. 3066 per rural household per month!
- 4.5. Interestingly, small farmer is taken as one having less than 12.5 acres of land ownership. Who is a smallholder farmer then? The one with small land holding or even less than it? As per latest National Census 2017, there are 110 million people living in the Punjab, which comes to 18.4 million total households in the Punjab, out of which rural households in the Punjab come to 11.6 million @ 63.29% rural population. Whereas landed households in the Punjab are around 5.2 million (Agri Census Punjab 2010) About 42% landholding fragmentation rate in early 1990 has now crossed 67% by 2018 as an estimate. It means 6.4 million rural households in the Punjab, who are landless and constitute 74% of total rural households plus 3.5 million landed farmers (68% absentee out of 5.2 million landed farmers-Agri Census Punjab 2010) are effectively and practically excluded from any package and development scheme being markedly absent from the radar screen of economic development. When yearly increasing Agri credit consumption in the last 5 years is plotted against Agri (crop sector) output, it may be evaluated if they are ending up in consumption loans, as the two basic indicators like sales of agriculture machinery and area under fodder cultivation in the Punjab are not corroborating this increasing consumption. (The Punjab contributes over 60% livestock produce of the country; it is 55% dairy both Buffalo and cattle combined.)
- 4.6. Another very dangerous trend for national food security is the urbanization of rural areas. They are no more rural in lifestyle and industry with associated damage to the agriculture eco-system of a given village. This is over and above rural-urban migration. With exploding population and growth in services sector of the economy (contributing now 60% to national GDP), the demand for livestock products are but expected to grow exponentially. Are

we prepared to reap the whirlwind for which window of strategic opportunity is fast closing as double jeopardy in the form of lower than regional level of duty on import of dry milk over and above under invoicing and smuggling has broken the back of livestock farmer in the country? It may be noted that livestock is basically kept for dairy purpose in the Punjab and it is inherently a business of rural women who spends 59% of her daily time in livestock related activities in the Punjab. Any inverse growth would have extremely undesirable impact along gender dimension as well. World Bank Report on Stunted Growth in Children ranked Pakistan as world ranking number two in stunting in children with 43% children suffering from stunting. This is the future labour force with which prospects of our national socio-economic growth is but written on the wall. Another interesting observation in the said report is exclamation: “Poor are stunted, rich are stunted, too.”

- 4.7. As per a study (Burki, 2016) one pound increase in birth weight leads to 7% increase in lifetime earnings in the US. For Pakistan this estimate stands to the tune of USD 11 billion per annum. Protein energy malnutrition leads to very high productivity losses and a 1% loss in adult height in Pakistan leads to a 0.3% decline in rural wages. Countries with low nutritional indicators suffer huge costs in terms of lost productivity and growth in GDP. In Pakistan, if the nutritional gap in protein energy, iodine deficiency and iron deficiency is eliminated, it has the potential to increase the level of GDP by 4% per annum. Moreover, 86% children of 10-14 years consume less than the recommended calories. It implies that Pakistan would need Rs.64 billion per day to bridge this nutritional gap, of which Rs.39 billion would be required for the rural poor. About 70% to 75% urban and rural population consumes less milk than the estimated milk poverty line. The highest proportion of population below this benchmark belongs to children in the age-group of 10 to 14 years.
- 4.8. Recent studies have established that better nutrition and child health affects child school performance and post-school productivity. Specific evidence from Pakistan suggests that there is a positive effect of pre-school height-for-age z-score on school enrollment for girls. The direct relationship between per capita milk calories consumed on school attendance rate is positive. If an average household consumes 153 milk calories per capita. Holding all else constant, an increase in per capita daily milk calories by its sample mean of



153.1 increases the probability of school attendance by 0.95 percentage points. Moreover, the probability of school attendance initially increases with per capita milk calories and reaches its maximum point at 770 milk calories per day, which is much higher than the mean calories. By implication, these results suggest that there is a huge gap between the present level of milk calories consumed and the desirable level” (Burki, 2016; and PILDAT 2016).

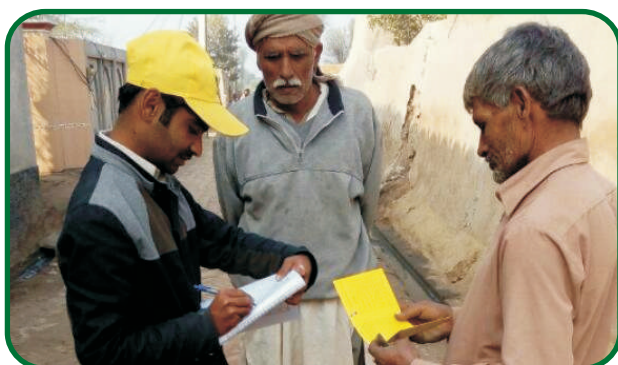
- 4.9. Rural communities are adversely affected by liberal import duties on dry milk which work as double jeopardy on the farmer as is evident from the evidence produced by UN Comtrade, based on data from Customs’ Departments of India and Pakistan, respectively. Incidence of adverse impact on the farmer due to such malpractices (under-invoicing) becomes multi-folded. Then devastation caused by tea whiteners in the country to both farmer and the consumer cannot be fathomed. Both are over and above smuggling. Heavy import duty at par with India and Turkey is thus recommended if we want to take care of our national food security. Dairy is primarily kept for milk production in Pakistan and India and meat is but a by-product, which will try to shrink along the disposing off of national dairy herd which is but already underway as is corroborated by the Punjab Livestock Census 2018.
- 4.10. Thus, productivity growth lowering is because of poor market gains by subsistence level farmers who constitute 93% of total farmers in the country. Corporate farmers are less than 1% but policies are targeted to attain corporate farming or lest cooperative farming. This approach has not produced desired results over time. Cooperative is also market driven. Hence, need is to minimize government intervention in the form of price interventions to minimize shocks to fair market competition and ultimate conversion of comparative advantage into competitive advantage in tandem with ban of import of dry milk, if we want to ensure our national food security. Example is premium quality livestock produced for Eid market where there is no price capping as compared to junk production for routine markets where price capping is aggressively imposed. To ward off continuity of their losses, the farmer has capped its production. This is how research becomes irrelevant in the absence of fair & competitive market. Direct subsidy on consumer prices may be an option just like the one given by Japan through multiple financing channels. In fact, whole Paradigm of agriculture management requires a

transformation additionally in terms of regional and district specific production systems.

- 4.11. Technology has a diffusion cost. In the absence of fair market mechanics and fair return to the farmer on his investment due to hostile pricing interventions by the government, cost translation framework is glaringly missing.
- 4.12. Climate change has far sinister expressions like the one with invasion of unwanted vegetation on no-man's land. Downstream Chenab river is worst affected. It has more repercussions than talking in terms of temperature rise. Cropping patterns are also changing which can impact the ecology and has the potential to affect the breeding systems of livestock by changing their routes of migration. More assertive and serious investment and policy preference is needed. There is dearth of expertise on the issue for dealing at international fora, particularly the legal aspect dealing with agriculture and food laws (WTO laws etc.) leading towards overall loss to national economy in the longer run.
- 4.13. Livestock is a traditional banking product and it may be dealt with accordingly. It may be noted that livestock picking is the biggest cost reducer of crop harvesting operations. Any large scale mechanization may be evaluated as much as effects of climate change on shifting patterns of cotton and sugar cane belts, respectively. A careful balance may be assessed for diversification of targeted subsidies for which pre-requisite is enhancing the statistical capacity (along three dimensions of practice, collection and processing of data) of respective provincial agriculture and livestock departments so that credible translation of optimal benefits could be ensured besides empirical evidenced based projects, programmes, strategies and policies. Overall net food sufficiency may be given a try instead of single staple overblowing. CPEC is posing both a challenge and opportunity. China has exceptionally huge mounds of its local soybean stocks due to trade opening under WTO, incurring maintenance costs. It is building its huge industrial production base for dairy by phenomenal subsidies and public-sector investment in farming communities. Organic branding of local breeds and produce may be the ultimate way out for our local livestock sector. Hence, future animal breeds must be declared for best genetic exploitation for which

local animals may compete way ahead of best quality foreign breeds. China stabilized our local buffalo several decades ago. Australia did same for our cattle. Have we done something?

- 4.14. Starting from 2014 end, the L&DD Department Punjab has created largest on farm services delivery apparatus in the world for subsistence level farmers, comprising over 9000 medical kit mounted motor cycles, 347 mobile Veterinary dispensaries, 44 mobile veterinary laboratories, 9 state of the art mobile training schools for rural women with state of the art audio-visual facilities, delivering 434 well documented services at the doorsteps of millions of livestock farmers, spanning across all of 25,892 villages of the Punjab. This shall go a long way in rectifying historically oppressive market distortions caused by the government imposed price capping on milk and meat, leading ultimately farmer to cap its livestock production. However, situation has gone so worse that price de-capping needs to be backed up by a dynamic support framework in the form of free mass vaccination, de-worming, and other allied provisions on the pattern of Punjab model in last three years as a core public good to make 74% of total farmers competitive to eye on the genesis of small to medium commercial farmer through provision of access to industrial credit to this landless yet largest economic segment- contributing 58.3% in Agr. GDP. All national, provincial and local development policies must concentrate on this segment for socio-economic amelioration and uplift. As per credible studies (e.g. Burki 2016, PILDAT 2016), while corporate farms in the country had been knocked out of business on a single factor of fodder being 38% less competitive, only these subsistence level farmers could sustain but their Total Factor Productivity is stagnant for last 10 years, meaning they were shrinking production. If properly focused for development, these livestock farmers alone have the potential to transform the face of economic development of the country, which is suffering acute food insecurity.



## 5. SILVER LINING

- 5.1. Identification of a problem is first step towards solution of that problem. Once factual pieces of information are available, appropriate and apposite set of strategies can be made in the form of targeted interventions. Interlocking of borrowed foreign models would not produce results. Income distribution is not possible without transforming supply chains into value propositions for all stakeholders. Comparative advantage is markedly there in our local production systems and set of skills available with rural farming communities may convert that into competitive advantage. But for that to happen certain level of market traction requires to be created for which market imperfections in the form of price capping on milk and meat may have to be done away with.
- 5.2. Livestock sector has tremendous potential to transform the whole face of national economy. It can have a positive impact on school attendance, nutritive poverty reduction, relative poverty reduction, gender mainstreaming while ensuring national food security. Nonetheless, it may be kept in mind that this sector needs a very peculiar type of management paradigm, having referred impacts to and from wider sectors of the economy. This is extremely labour intensive sector. This is best way out available to address the challenge of landholding fragmentation, which has rendered crop agriculture unfeasible. This can reverse the urbanization trends or at best arrest its negative socio-economic impact. By improving yield per carcass, and by observing health related protocols and their documentation thereof, it can multiply the exports' earnings. If patronized at par with regional countries like India and Turkey where duty on import of dry milk powder and whey powder was increased up to 180%, inducing their local dairy industry to start providing exportable surpluses, handsome foreign exchange may be earned in short to medium terms. The greatest disadvantage of local farmers, particularly majority subsistence level farmer is their proneness to domestic and international shocks. Same can be converted into strength by using unique dynamics peculiar to livestock sector to kick start production systems and to optimize them for enhancing production. The biggest criticism domestically and internationally has been low productivity of our local breeds of animals i.e. low milk production and poor food conversion ratio (FCR). The critics fail to reason why these very animals become highest yielders in their respective ecological zones and habitat. Furthermore, research needs to be made as how



the residues, the poorest kind of inputs, can ensure high yield compared with the exotic breeds bred on high energy feed with comfortable environment. It further needs to be evaluated that how much energy is consumed to resist the extreme weathers for the maintenance of their bodies by these local animals, especially when they are forced to use substandard drinking water. The polyethene bag is worst kind of environmental disaster afflicting grazing livestock.

- 5.3. Luckily, the production potential of local animals is intact. Their calving intervals and puberty age can be brought back to the original prowess which is presently lurking three times less than the potential. This very factor can add 40% into milk and meat production more in the same cost by the same animals, culminating into competitiveness of the production efficiency. The reduced disease incidence, by adopting a preventive approach, screening of breeding males, ensuring reduction in losses caused by venereal diseases, increased birth weight and enhanced progenies, are the inner strengths of recent interventions. The restoration of required number of breeding males with improved health has added to the reproductive efficiency. All these things are bright ray of light even in worst scenario. This is despite the neglect and the devastation caused to the grazing lands and no-man's land.
- 5.4. It has been transpired that each ecological zone and specie can best be used for a specific purpose and has its own bearing limitations. For instance, in some areas animals are best suited for meat production, especially the water deficit areas of North and South. The Central Punjab, especially the river belts, are best for milk production, leaving meat as a secondary product. Furthermore, before criticizing the milk yield of local breeds, the fat and protein contents and their ratio thereof in terms of the intake and environmental factors. This Department feels that unlike European countries, where high quantity of milk and meat production is input driven, the local animals are producing in worst possible conditions, which once ameliorated may produce phenomenal results. Domestic milk production must be measured in terms of energy corrected values e.g. one Kg of buffalo milk with 7-9% fat content should be taken equivalent to two Kg of exotic cattle milk with half the fat contents, thus setting the right benchmarking.

- 5.5. It must be noted that small farmer and production systems thereof can come up with more production and productivity instantly.
- 5.6. The Livestock & Dairy Development Department Punjab, starting from 2015, has effected a complete Paradigm shift from curative to preventive side of livestock health sector management, with production enhancement as its logical corollary. Now each of services delivered is being electronically mapped on 9211 Virtual Governance System with complete electronic archiving for all times to retrieve. This has created largest live database of livestock farmers in the world, which can be leveraged to create innovative digital financial products, thus bringing the digital revolution to rural marginalized segments. This will also induce the financial inclusiveness for which branchless banking players of the country are already on board. Simultaneously, this is first major step for moving towards disease free status. Accordingly, OIE has been approached to get whole services delivery and documentation paradigm of L&DD Department Punjab evaluated. Disease control zones have been declared. Free mass vaccination, de-worming and disease mapping have been made permanent features, as core public good to bring competitiveness into the production system of subsistence level farmers. Hence, the trust deficit of the farmers and other stakeholders has started shrinking, which in itself is an effective ingredient to improve the productivity, especially when viewed as change of the mindset of the consumer as the demand of the quality products has stated increasing. Truthful sharing albeit confessional shall thus remain lynchpin for the future progress.





2017-18

# سال شمار کی مکمل پتختا



خانانوال

ڈیویشن کی طرح سرٹو فارمز کی تعداد

راولپنڈی	268,186
گوجرانوالہ	371,253
سرگودھا	384,464
لاہور	249,671
سیالکوٹ	277,740
فیصل آباد	489,455
بہاولپور	367,922
ڈی جی خان	402,480
ملتان	350,487

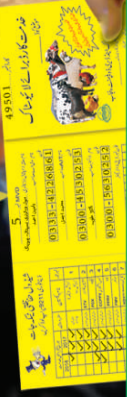
محکمہ کے عمل کی  
معزین دیہہ و عیالین  
کی بھرپور ہنمانی کا



رچرٹ فارمز کا ڈیٹا جدید ICT  
محکمہ سے تربیتی کیا ہے

0212-421212

محکمہ لائیو سٹاک  
پنجاب



محکمہ لائیو سٹاک اینڈ ڈیری ڈیولپمنٹ، حکومت پنجاب





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