



## Livestock & Dairy Development

Role of Social Sector and Rural Community in Pakistan



December 16-17, 2014

# Livestock Development for Socio Economic uplift of Rural Pakistan



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# My Thoughts



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- Sectors (**Livestock and Veterinary Public Health**)
- Policy Shift “ From Curative to Preventive”
- Livestock Production through Regular Extension Services
- Institutionalization of services with establishing Systems
- National Animal Herd Identification Database (**NAHID**)
- Punjab Animal Registration and Identification System (**PARIS**)
- Livestock Emergency Guidelines and Standards enforcement
- Punjab Animal Health Regulatory Authority (**PAHRA**)



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Today.....

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- Importance of sector
- Livestock as Livelihood – *Jandar Surmaiya*
- Livestock development through Production Extension services
- Livestock Policy support on Production Extension services
- Practical focus on Extension services
- Players in provision of extension services
- Livestock extension services for Five Freedoms
- Establishing systems for provision of regular extension services - Suggestions



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### Livestock Development for Socioeconomic uplift of Rural Pakistan



• *Jandar Surmaya*



• Livelihood



•  $\frac{3}{4}$  of Pakistan

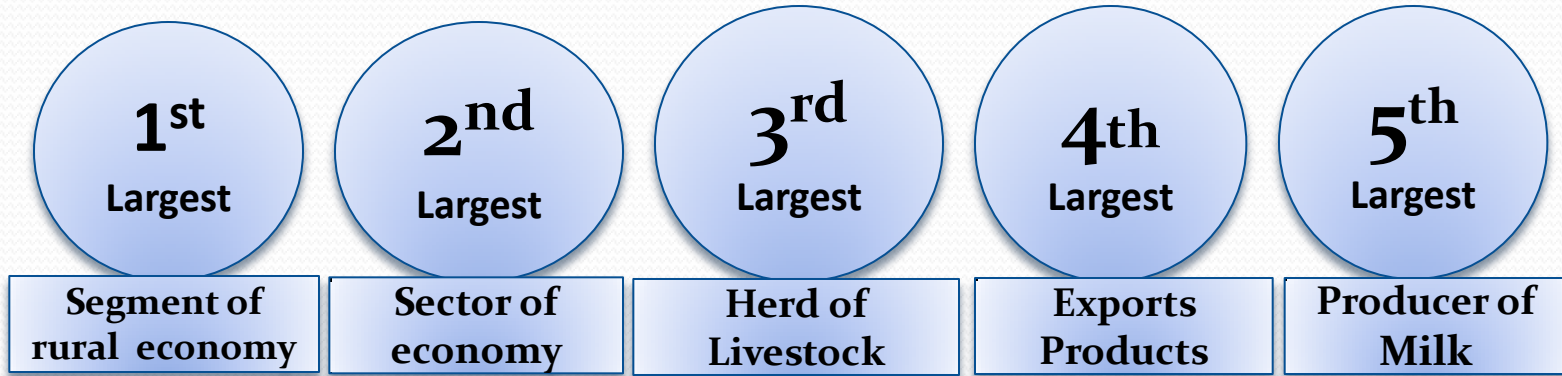


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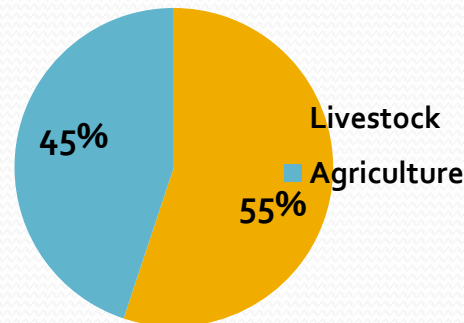


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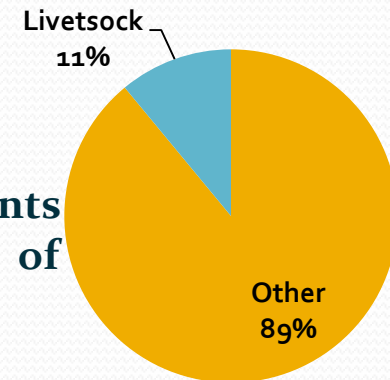
## In Agriculture Sector Contribution

Livestock contribute 55.1 % of the Agriculture Sector in national economy.



## In GDP Contribution (Livestock)

Livestock accounts for 11.5 percent of the total GDP.





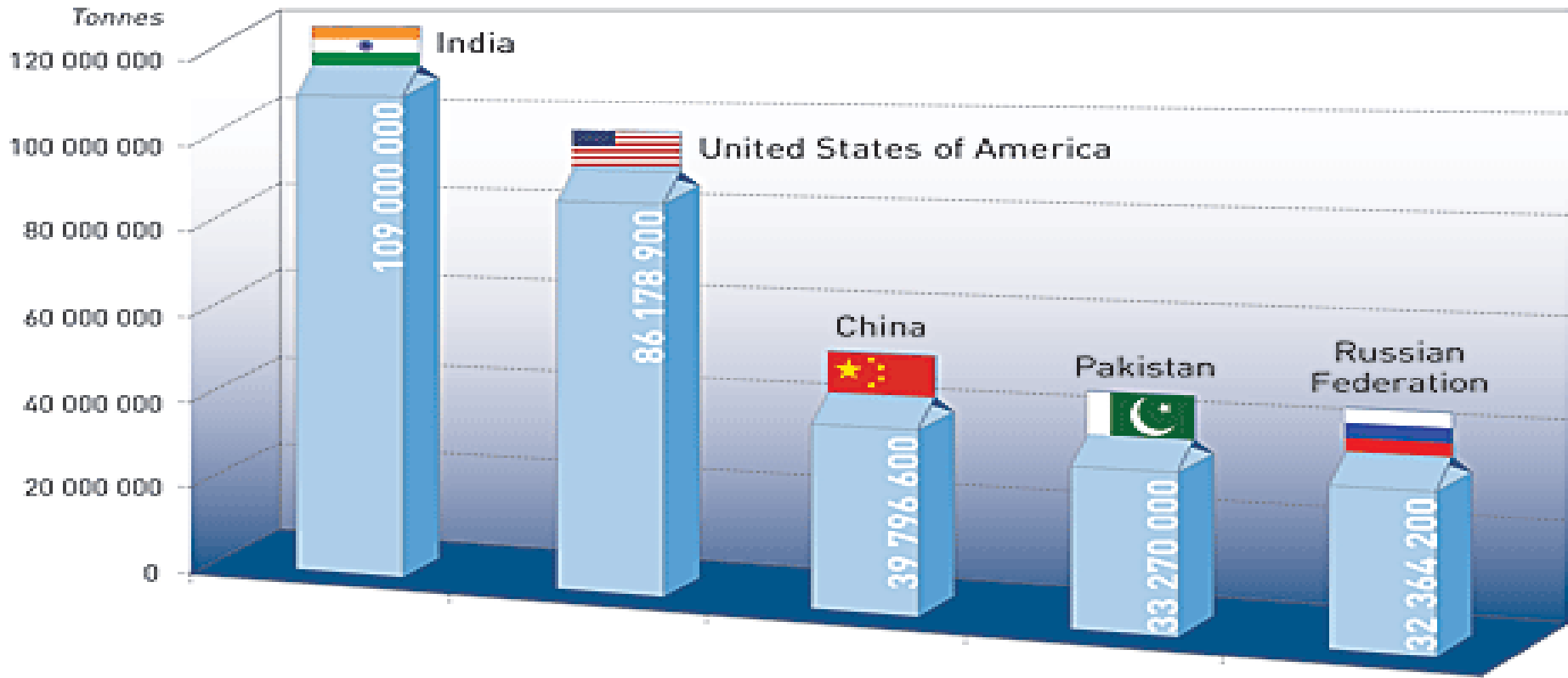
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## Milk Production (Buff + Cow)





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# LIVESTOCK SECTOR OF PAKISTAN

- Livestock contributes 55.1% to the agriculture value added in the country
- Share in National GDP is 11.6%
- Foreign Exchange Earnings constitutes 8.5% of total exports
- Small dairy holders dominate and possess more than 90 % (93-97 %) of Livestock owning 1-5 adult cows or buffaloes
- Only 3-7 % livestock owners fall under large farms
- Economic Survey of Pakistan & Livestock census 2006



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# LIVESTOCK SECTOR OF PUNJAB

- Punjab has 52 % of the total livestock population
- Punjab constitutes 63 % of the total milk production
- Small dairy holders (having 1-6 animals or 1-3 dairy cows /buffaloes) dominate and possess 89 % of the cattle herds and 85 % of the buffalo herds
- Only 3-7 % livestock owners fall under large farms
- Economic Survey of Pakistan & Livestock census 2006



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# LIVESTOCK POPULATION AND PRODUCTION IN PAKISTAN

<b><i>Species</i></b>	<b><i>2006 census</i></b>	<b><i>2011-12</i></b>	<b><i>Milk production</i></b>
●Buffaloes	27.3 million	32.7 million	29.565 million tons
●Cattle	29.6 million	36.9 million	16.741 million tons
●Goats	53.8 million	63.1 million	0.779 million tons
●Sheep	26.5 million	28.4million	0.037 million tons
●Camel	0.9 million	1.0 million	0.829 million tons
●Total			47.951 million tons



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## Livestock- our Assets

### Cattle

#### *Dairy Cattle*

- 1.Sahiwal
- 4.X-bred

- 2.Red Sindhi

- 3.Cholistani

#### *Dual Purpose Cattle*

- 1.Tharparker
- 4.Gabriali

- 2.Kankrej

- 3.Achai

#### *Draught Type Cattle*

- 1.Bhagnari
- 3.Dhanni
- 5.Rojhan

- 2.Dajal
- 4.Lohani

### Buffaloe (Dairy)

- 1.Nili-Ravi

- 2.Kundi

- 3.Azakheli





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## Livestock- our Assets



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# DAIRY BREEDS and PRODUCTION POTENTIAL

Breeds	305-Day Milk Yield
Sahiwal cows	1500-2200 (Max. 7000 Kg)
Cholistani cows	1400-2000 (Max. 4500 Kg)
X-Breds	2000-2700 (Max. 8000 Kg)
Nili-Ravi buffalo	1800-2400 (Max. 6500 Kg)
Kundi buffalo	1600-2200 (Max. 6000 Kg)





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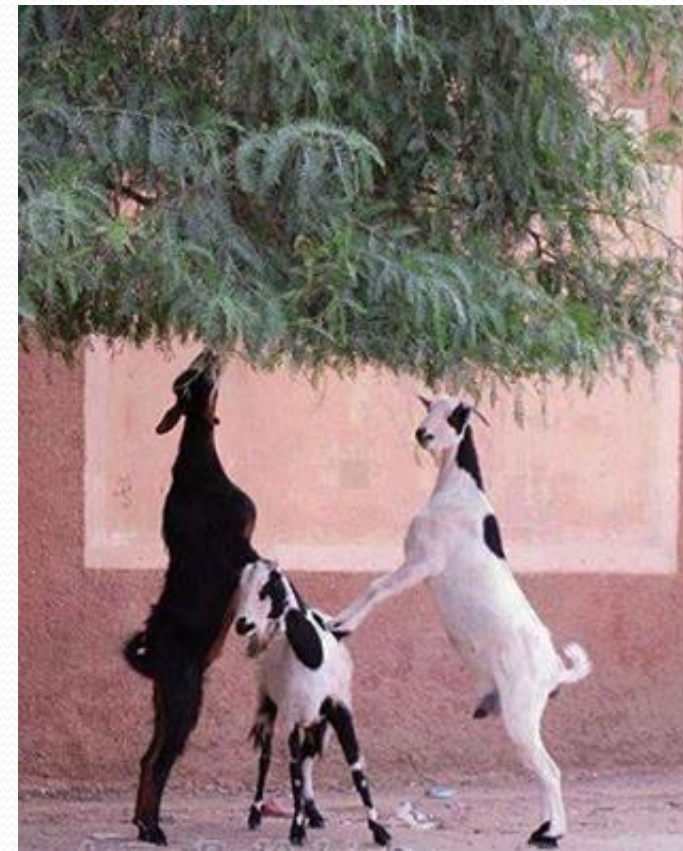
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# GOAT BREEDS

- Total Number = 25
- Milch type (Beetal, D.D.Panah, Kamori)
- Mostly dual purpose (mutton & milk)
- Average milk yield (milch type) = 2-3 lit/day
- Average milk yield (other) = < 1.3 lit/day
- Weight of Adult Male = 25-45 kg
- Average dressed carcass = 45-55%





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# SHEEP BREEDS

- Total Number of breeds =28
- Thin-tail = 21, Fat-tail = 07
- Mostly dual purpose (mutton+carpet wool)
- Weight of Adult Male =35--45 kg
- Average dressed carcass = 45--55%
- Average annual fleece weight=2--5 kg





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# LIVESTOCK PRODUCTION SYSTEMS



1. Rural Subsistence Small Holdings (55-60%)
2. Rural Market Oriented Small Holdings (20-25%)
3. Rural Commercial Medium Size Farming (10-15%)
4. Peri-urban Commercial Large Size Farming (6-8%)
5. Corporate Dairy Farming (123 Farms)



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# SIGNIFICANCE OF BUFFALO

- Main dairy animal (20.6 million) of rural having 1-6 animals (85%)
- 65% & 55% share in total milk & meat production respectively
- Better converter of poor quality roughages into milk & meat
- Rich genetic potential (Max-6500 Kg)
- Cholesterol content 0.65 mg/g verses 3.14 mg/g in cow
- **High in** Protein, calcium, iron and phosphorus
- Buffalo metabolizes all dietary carotene into vitamin A.
- Better cheese (Mozzarella)





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# SIGNIFICANCE OF SAHIWAL BREED

- ❖ Global animal genetic resource
- ❖ High milk producing ability amongst zebu cattle under harsh climatic conditions
- ❖ Resistant against tropical diseases
- ❖ Ticks and heat tolerant
- ❖ Found in twenty nine countries
- ❖ 2.061 Million according to livestock census 2006 in the province.





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# Focus Livestock Development

## Focus on pro-poor growth ?

- ❖ 88 % livestock raised by small and landless farmers
  - 30 – 35 million rural population dependent on livestock
  - 40% dependent on livestock for income
- ❖ **Livestock development important for economic growth and poverty alleviation**
  - Livestock contributes >55% in agriculture
  - 11% in national GDP
  - 4 % Annual growth (consistent)



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# Rural Livestock Production

- 67% rural population. ( 30-35 million engaged in livestock business)
- Livestock Production 2<sup>nd</sup> biggest economic activity.
- 10-25% income of small farms are from Livestock Production.

## Livestock is Livelihood



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# More focus on Buffalo



- 165.72m Buffalos (75% of them habitat in Asia)
- Pakistan has 14% of the world's Buffalo Population.
- Black Gold(Nili Ravi).



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# Limitations

- Available indigenous genetics with low performance
- Insufficient available nutrition as per production and maintenance requirements
- Weak and outdated husbandry practices
- Low breeding and AI performance
- Out of reach area or more focused area.
- Lack of farmers awareness activities
- Non adoption of modern technologies
- Poor financial status of farmer



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# Improvement by ....

- **Legal and Policy framework enforcement**
- **Conduction of Livestock census with available livestock services**
- **Launching of Best Dairy Practices / production models for smallholders farming system.**
- **Small Holders meat development by establishing Feedlot fattening system**
- **Provision of Extension Service at Farmers doorstep**



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# Federal Livestock Policy

## Vision

Promoting livestock to provide safe and quality food products at competitive prices, covering entire value chain with focus on market and poverty reduction

## Policy

Private sector led development with Public sector providing enabling environment



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# Federal Livestock Policy - Focus

- Productivity enhancement
  - Increasing genetic potential
  - Improved husbandry practices
  - Focus on nutrition
- Value addition
- Access to market
- Strengthening extension services and service delivery
- Addressing food security concerns



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# Punjab Livestock Development

## Mission of L&DD

### Punjab Vision 2020

*“To **create** enabling environment for raising livestock production and use it as a **vehicle** for social security, poverty alleviation and rural development ultimately leading towards domestic **food security** and creation of exportable surpluses”.*

*‘**Support** livestock development in a **policy & regulatory** environment that enables farmers to realize the dividends of livestock farming by **smartly** deploying public investments in **core** public goods & inducing private capital / initiative in the sector for poverty alleviation, food security & generation of exportable surpluses’*



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# Punjab Livestock Policy - Focus

- Government of Punjab's focus on pro-poor growth
- Poverty alleviation through focus on small farmers
  - 35 - 40 % of income dependent on livestock
- L&DD Department
  - Functions, Services, Directorates etc.
  - Various existing and planned initiatives
  - Shift from Curative to Production and preventive health oriented services
- L&DD's ongoing work on developing policy and legal framework / strategic plan



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# LIVESTOCK POLICY

Participatory approach

Improved  
management of  
natural  
resources

- Private sector led development with public sector providing enabling environment

Focus on  
smallholders

Private sector



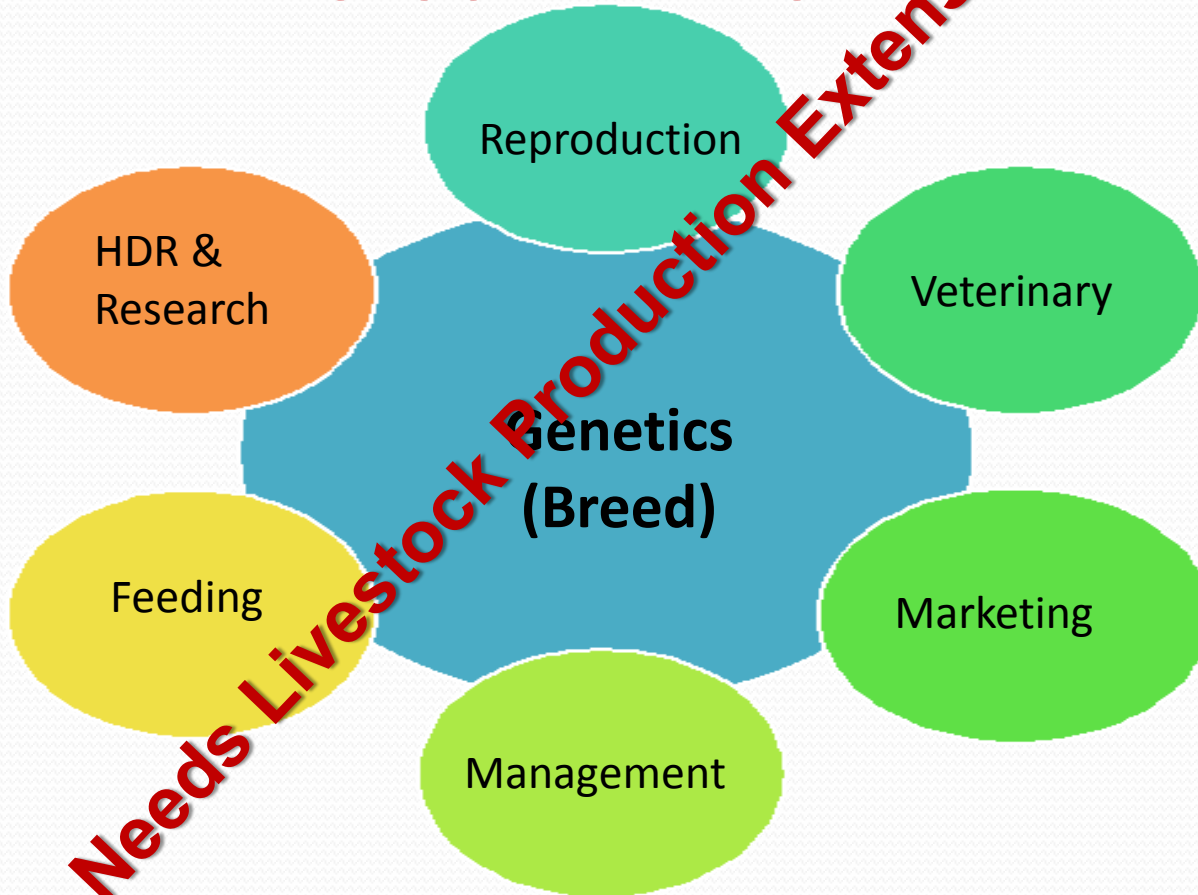
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## DESIRED LIVESTOCK DEVELOPMENT APPROACH





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# Extension link with Livestock Policy

**Livestock-based  
value chain  
networks**

**Extension  
with  
community  
Participation**

- globally competitive
  - dynamic
- demand-driven
  - diverse
  - integrated.

### **THE STRATEGY:**

- Strengthening - livestock-based supply chains
- Facilitating - potential livestock-based supply chains.- Livelihood



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## Livestock is Livelihood

### Livestock Production Extension Services through Community Participation





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# Focus on **EXTENSION** service



Support and enhance the practice of community development in the area.

Enable skills, ideas, information to be mobilized .

Promote co-operation and collaboration among community.



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# EXTENSION SERVICES-WHY?

- Functional
- Efficient
- Cost-effective

EXTENSION SERVICES

LONG-TERM SUSTAINABLE LIVESTOCK PRODUCTION SYSTEMS



**LDDC 2014**

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# **Improving Livestock Production through Extension Services**

**Livestock extension within production systems**

**Production extension within animal health services**

**Production extension via specialist services**



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# Who manages extension?

NGOs

**Cooperatives**

Universities  
or research  
institutes

Commercial  
sector.

Village-level  
primary  
societies .

# With Community Participation



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## COMMUNITY PARTICIPATION

Promote representative participation .

Engage community members in problem diagnosis .

Help community to understand the economic impact associated with alternative solutions to the livestock health problem.

Assist community members to solve problems by active participation .

Increase leadership capacity in the community.



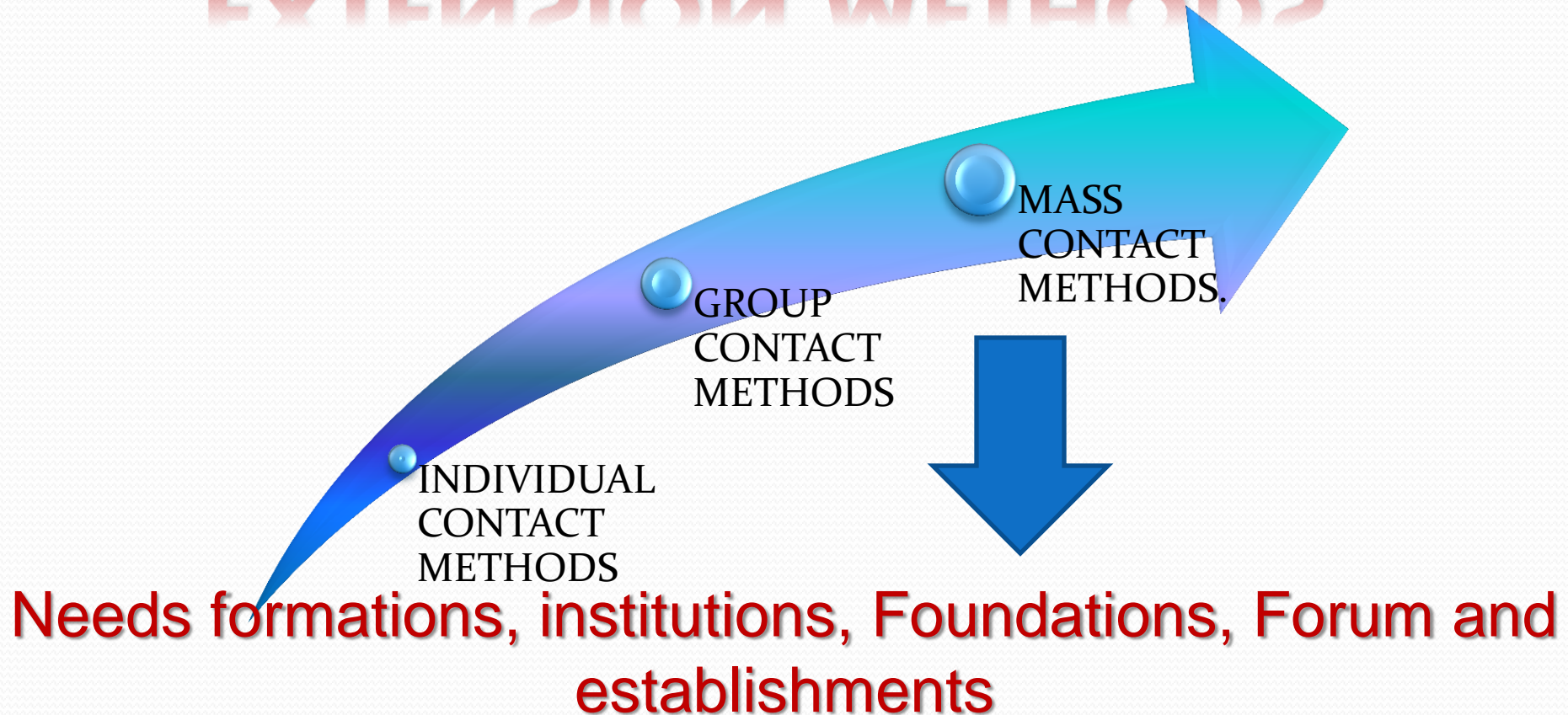
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# EXTENSION METHODS





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# INDIVIDUAL CONTACT





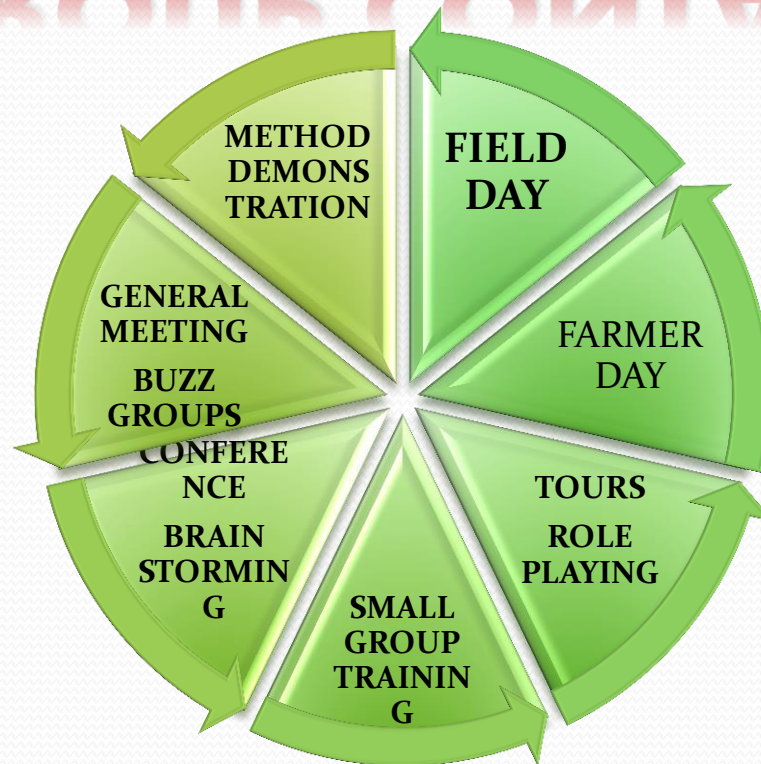
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# GROUP CONTACT





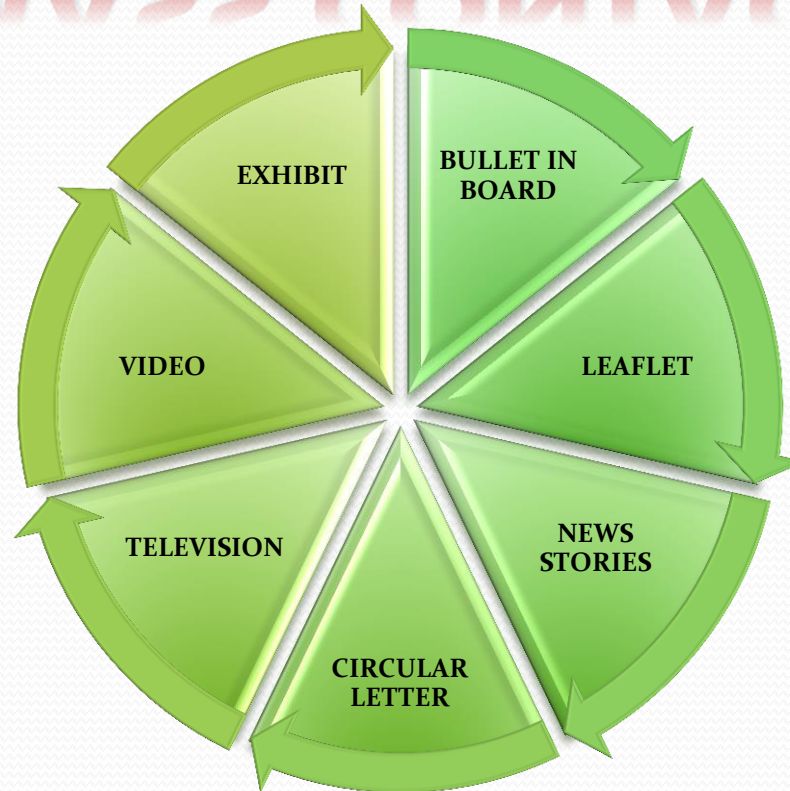
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# MASS CONTACT





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# APPROACHES

General extension service

Commodity based services

Participatory services

Project driven services

Educational/institutional (University based) services



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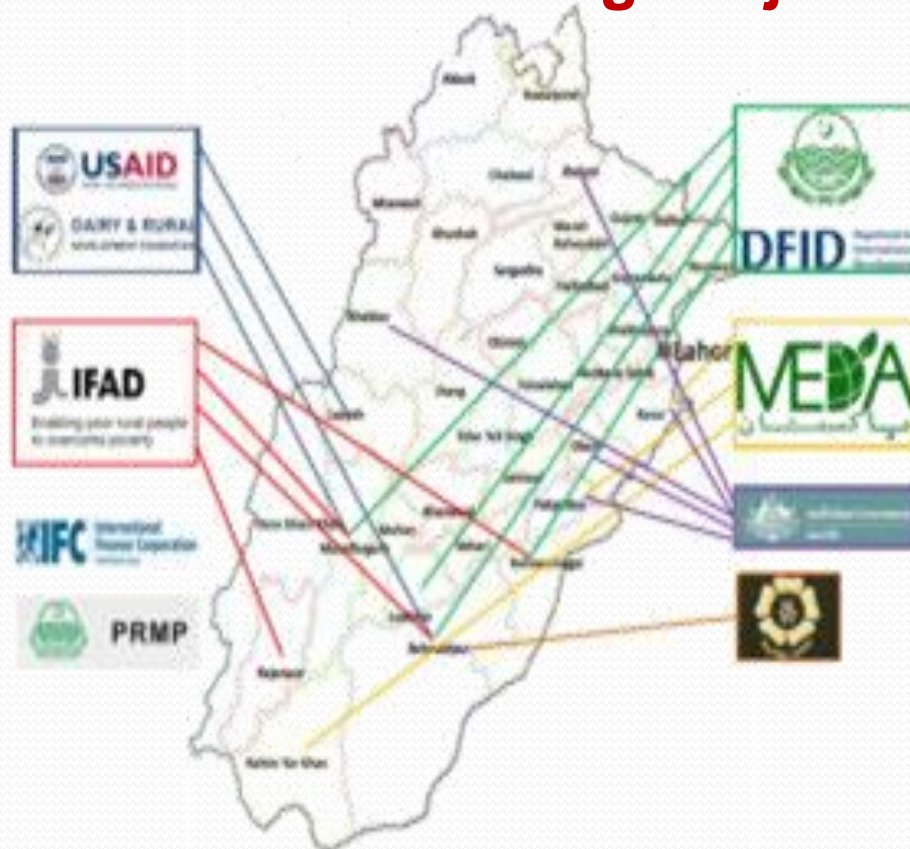
## Livestock Development through Extension Services



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### AREA WISE PRESENCE OF DONORS / PROJECTS IN PUNJAB

## Working Projects





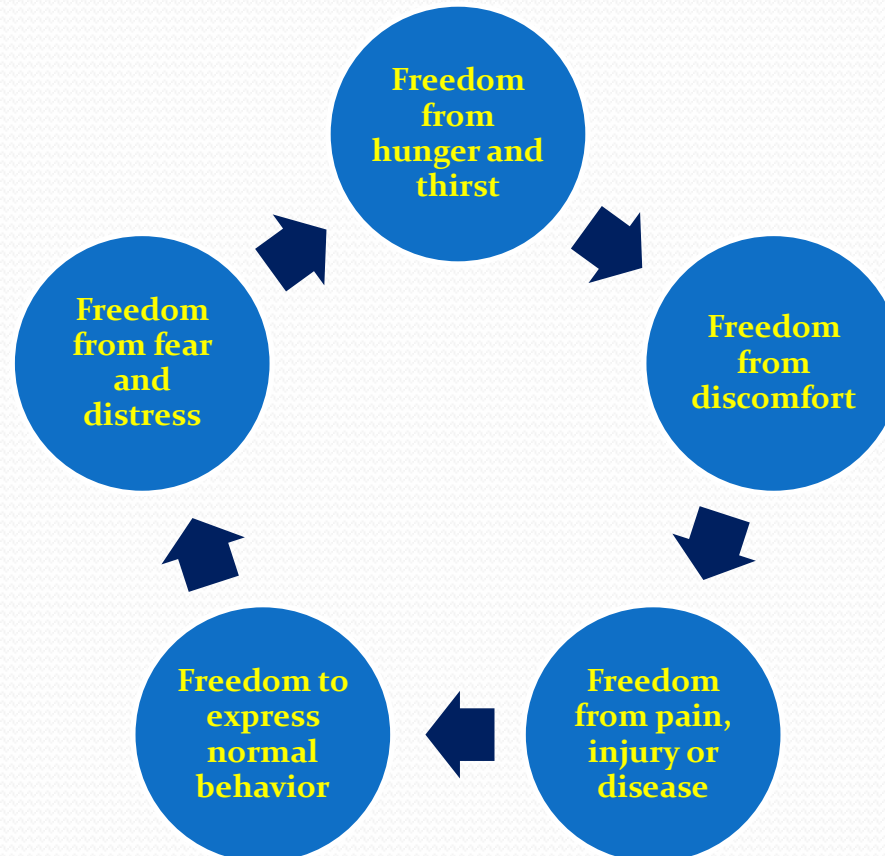
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## Livestock Extension 4 5 freedom





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# 5 Freedom need 6 Systems

- Provision of Enabling Environment System having strength of Legal and Policy Framework.
- Defining role and responsibilities of public and private sector.
- Establishing Livestock Emergency Guidelines and Standards to minimize economic losses
- Livestock Production Extension System (LPES), launched and implemented by private sector
- Establishing Livestock Product Market Linkages system by involving Grower, Processor and consumer.
- Establishing National Animal Herd Identification Database (NAHID) to realize the animal wealth with potential.



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**That's All  
so  
Thank You All**

# Players in Livestock Development

Donor	Thematic area	Government priority	Donor Priority	Area	Interventions
<b>Curative and Preventive Animal Health Services , Disease Surveillance and Management.</b>					
IFAD	Institutional and HRM support	Institutional and Human Resource Development	Social Mobilization, Technical assistance and Capacity building from September, 2012	4 district of Punjab, Bahawalnagar, Bahawalpur, Muzaffargarh and Rajanpur	Social Mobilization and Capacity building
DFID (PEOP)			Preventive Health Care, Better Farm Management Practices	Bahawalpur Bahawalnagar Muzaffargarh Lodhran	Farmer Days, Vaccination, Deworming
USAID/Firm	Regulatory and Legal support	Review and formulation of Acts and Laws	Support for formulation with review	Punjab	In process with Firm USAID
USAID, FAO	Technical Support	Support for Diagnostic labs, Surveillance and control of animal diseases	FMD surveillance and control	Selected area of Punjab	Capacity building of lab staff and sample collection
World Bank	PPP and private sector development	Strengthening of vaccine production and public sector livestock farms as commercial entrepreneurs	Technical support and identification of party	Punjab	Implementation of PPP mode with review on PPP Act

# Players in Livestock Development

Donor	Thematic area	Government priority	Donor Priority	Area	Interventions
<b>COMMUNICATION AND EXTENSION</b>					
PRMP (ADB support)	Policy Support	Effective Communication Strategy	Communication Strategy	Punjab	Establishment of Communication Unit Communication Strategy
PEOP (DFID)	Technical Support			Bahawalpur Bahawalnagar Muzaffargarh Lodhran	Technical Support to L&DD in initiatives on communication
DRDF (USAID)	Capacity Building		Better farm management practices, Capacity Building	Bahawalpur, Muzaffargarh, Layyah	Capacity Building/ Farmers Training
ASLP (Aus Aid)			Better farm management practices, Capacity Building	Okara, Pakpattan, Kasur Jhelum, Bhakkar	Farmer Training
IFAD			Better farm management practices, Capacity Building	Bahawalpur, Muzaffargarh, Rajanpur, Bahawalnagar	VA and Para Vet Training
DFID (PEOP)			Better farm management practices, Capacity Building	Bahawalpur Bahawalnagar Muzaffargarh Lodhran	Farmer Training, Extension Messages through cell phones
			Livestock management, Training of Livestock Raisers and LAs		

# Players in Livestock Development

Donor	Thematic area	Government priority	Donor Priority	Area	Interventions
<b>Access to Finance, Marketing and Value Addition</b>					
ASLP (Aus Aid)	Technical Support	Market Development			Milk Marketing Chain
ASLP (Aus Aid)	Institutional and HRM support	Market Infrastructure, Marketing and Investment, Enterprise Development, Public Private Partnership	Human Resource Development	Okara, Pakpattan, Kasur Jhelum, Bhakkar	a. Farmers/ Extension Workers Education b. Induction of female extension workers
USAID, DRDF				Punjab	a. Farmers/ Extension Workers Education b. Induction of female extension workers
USAID, DRDF	Education and Skills Development		Self employment and poverty alleviation, Youth employment and rural income generation	Punjab	
MEDA			Technical Support PPP/ Private Sector Development		Technical Support PPP/ Private Sector Development

# Players in Livestock Development

Donor	Thematic area	Government priority	Donor Priority	Area	Interventions
<b>Nutrition- Feed and Fodder</b>					
DFID (PEOP)	Skills Development/ Capacity Development	Better Animal Nutrition, Better Farm management	Livestock management, Nutrition improvement	Bahawalpur Bahawalnagar Muzaffargarh Lodhran	Training of Farmers on Nutrition
BRAC	Technical and Financial support		Better Fodder Management		Silage Mechanics, Inputs
PLDDB			Better Fodder Management		
MEDA	PPP and market development		Supply of Inputs	Kasur Pakpattan Rahimyarkhan	Linkages to Market and VMCA input suppliers
DFID (PEOP)			Supply of Inputs, Better Feed Management		Improved Seed Supply/ Market Linkages
<b>BREED IMPROVEMENT</b>					
DFID (PEOP)	HR Development	Trained HR Staff	Capacity Building of AI Technicians	Bahawalpur Bahawalnagar Muzaffargarh Lodhran	Human Resource Development, Training of AIs, Strengthening of AI Centres
USAID (DRDF)			Capacity Building of AI Technicians	Bahawalpur, Muzaffargarh, Layyah	Strengthening of AI Centres
PLDDB			Capacity Building of AI Technicians	Punjab	Training of AIs
ASLP (AUSAid))			Capacity Building of AI Technicians		Training of AIs
PRMP (ADB Support)	Strategic Policy, Technical Support	Breed Improvement Policy, Genetic Improvement of indigenous breeds		Punjab	Breed Improvement Policy Regulatory and legal support



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## Strategic Directions



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