Inclusive Sector Growth Strategy – Dairy and Meat

Market Development Facility - Pakistan

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Pakistan Country Team
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## Acronyms and terms used

<table>
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ASF</td>
<td>Agribusiness Support Fund</td>
</tr>
<tr>
<td>Beopari</td>
<td>Livestock buyers/transporters</td>
</tr>
<tr>
<td>BMO</td>
<td>Business membership organisations.</td>
</tr>
<tr>
<td>Dodhi</td>
<td>The main trader/middleman in the informal private sector</td>
</tr>
<tr>
<td>DRDF</td>
<td>Dairy and Rural Development</td>
</tr>
<tr>
<td>ESRB</td>
<td>Embedding of socially responsible business</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FMD</td>
<td>Foot-and-mouth disease</td>
</tr>
<tr>
<td>GCC</td>
<td>Gulf Cooperation Council</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communications technology</td>
</tr>
<tr>
<td>Khal</td>
<td>Cotton seed cake</td>
</tr>
<tr>
<td>Mandi</td>
<td>Traditional market place</td>
</tr>
<tr>
<td>MDF</td>
<td>Market Development Facility</td>
</tr>
<tr>
<td>PLDDDB</td>
<td>Punjab Livestock and Dairy Development Board</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium-sized enterprises</td>
</tr>
<tr>
<td>UHT</td>
<td>Ultra-high temperature processing</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USP</td>
<td>Unique selling proposition</td>
</tr>
<tr>
<td>Wanda</td>
<td>Formulated feed</td>
</tr>
<tr>
<td>WEE</td>
<td>Women’s Economic Empowerment</td>
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</table>
Summary of Main Findings

The agriculture sector is the backbone of Pakistan’s economy, with 60 percent of the rural population dependent on it for economic gain. Livestock contributes 55 percent to agricultural value and 35-40 million people derive an income from livestock sufficient to meet their basic needs. Livestock plays an important role in the agricultural community as, apart from providing regular food and income from milk sales, it provides a capital reserve which can easily be realised through the sale of livestock in times of financial need. Livestock can be seen to play an important role in household level financial risk management. The animals are reared by women and men of a household, however commercial transactions are handled by the men exclusively.

The livestock sector has a high level of women’s involvement as ‘invisible’ actors, particularly in production and management activities. Women contribute significant hours of labour to caring for livestock, but are not directly involved in market transactions and have limited access to inputs and information.

In the Dairy and Meat sector, MDF aims to better connect livestock farmers to markets so they have access to a steady demand for produce, and premium prices that reward quality production. Overall, imperfect availability of productivity-enhancing inputs and information prevents farmers from making investments in more productive livestock farming. At the same time, inadequate markets mean there is less of an incentive for livestock farmers to seek better inputs and information.

Milk

Around 40 billion litres of milk are produced in Pakistan per annum. The trade of milk is dominated by an informal channel, whereas the formal channel trade is small, representing only five percent of total milk produced. Dodhi is the main trader/middleman in the informal channel that collects milk from the doorsteps of the farming households and provides them with credit facilities which are generally used to meet other farming or household needs. The dodhi then supplies milk to informal milk shops in the cities, to houses in urban areas, or to formal milk processors. During summer the likelihood of milk becoming spoiled because of hot weather is high so, to prevent spoilage, dodhis add water or ice to the milk which may be unhygienic. Dodhis also add water to increase the quantity of milk sold.

There is a demand and supply gap of around 3 billion litres which is satisfied by imported milk powder. The formal milk processing sector in Pakistan is growing in response to a domestic market demand for improved quality and a wider product range, and to the development of formal retail supply chains. While milk processors prefer to source fresh milk, the growing formal retail demand is outpacing their ability to procure sufficient quantities of quality milk.

Milk supply is higher in winter and, as a consequence, milk processors need to ensure they have an adequate supply during the summer period. This is when greater quantities are adulterated by the dodhis. Milk processors have recently expanded their collection operations to secure enough supply to cover all production seasons.
Collection of milk for formal processing is limited to areas of Central and Southern Punjab and Northern Sindh. The formal industry is developing in these areas because the low population density means a lower local milk demand and the availability of surplus milk at lower prices than in areas with higher populations. Opportunities exist in these areas to expand milk collection activities and connect remote area farmers with the formal market and to the higher urban market milk prices.

Dairy producers are more organised and capable in areas where milk processors/collectors are operating than in areas that are not connected to the formal industry. In locations that are not connected with the formal market, the yield of milk per animal is low, farming households use outmoded husbandry practices, and quality inputs are not available. Even in areas where processors operate and dairy production is well developed many people, particularly small farmers, have only a basic knowledge of animal husbandry and how to increase milk yields, income and profit.

Women, in particular, could benefit from improved access to information on animal husbandry practices and quality inputs. Access to productivity enhancing inputs and technology would make their workloads more manageable. Women could potentially perform the role of extension workers and provide information to other women farmers.

Dairy farming households in remote regions of Pakistan can improve their incomes if they connect to formal marketing channels and improve animal husbandry practices.

**Meat**

Farm level productivity for meat animals is low. Farming households treat their animals as a ‘bank’ i.e. an asset to be sold in times of need. Livestock rearing practices are basic; animals reared for meat are given the same feed as the dairy herd, and the use of inputs is minimal. This results in low carcass yields and variable quality meat. Some farmers, who rear animals specifically for selling at Eid, are comparatively better organised in rearing and feeding practices, and have better productivity.

Male calves, which are seen as a ‘by-product’ of the dairy industry, have potential for meat production but are generally undervalued as a source of farm income. Most livestock farming households have little knowledge of how to produce good quality meat animals, particularly from male dairy calves.

Trade in livestock is almost always managed through *beopari* who buy animals from farmers and transport them to primary and terminal livestock markets for sale. Transportation of animals from distant areas results in weight loss, and significant mortality in the case of small ruminants. This means a reduced supply of animals in the market. The loss of value from sales transacted with the *beopari* discourages farmers from further investment in livestock production.

Meat exports have expanded rapidly in recent years, but future growth is likely to be constrained by limited markets and transport logistics. There is a need for formal meat processors to expand the product range and meet customers’ quality demands if they are to sustain future growth.
Livestock farming households sell their animals when they need money, but they have the opportunity to improve business outcomes, value and returns if they focus on rearing meat animals according to modern husbandry and feeding practices.

As with milk production, women working in meat production could benefit from improved access to information on animal husbandry, quality inputs and market demand. Women can function as extension workers and provide information to women farmers but constraints such as lack of mobility exist.

**Inputs**

Formulated inputs, hybrid fodder and silage which improve animal nutrition and make livestock more productive are often only available in areas where formal milk processing is occurring. In other areas only traditional feed and seeds are available and there are often quality and availability issues with these.

Branded vaccines and medicines are available only in areas where milk processors are active, and the reach of the supply chains to small farmers is limited. Areas that are not connected with formal processing rely more on government subsidised, locally manufactured vaccines and medicines. Poor outcomes experienced with local vaccines and medicines (due to low quality and effectiveness) result in a strong impression amongst farmers that livestock production without the use of inputs is preferable and this reduces the demand for inputs.

Inputs are available and used in areas where milk processors are active and this provides benefits for meat producers as well as dairy farmers.

Women are unable to purchase inputs from the town markets. If the inputs they need are not available from their village market they depend on the males of the household to make purchases on their behalf and they cannot choose inputs on their own. Women will not, in most cases, be permitted to interact with a male agricultural extension worker on their own. There is a need to improve women’s access to information through the engagement of female extension workers and other means such as media, information and communications technology (ICT), and via business membership organisations (BMOs) and associations.

**Government and Donor Support**

Government and donor agencies have affected the dairy sector in Pakistan in a positive, but limited manner. There are many government and donor supported programmes operating in Pakistan that are targeting development across the dairy value chain. There are opportunities to build on some of these programmes through supporting the private sector to develop sustainable business operations.

There are some support programmes that have a perverse impact on the sector. An example is a government institute that manufactures animal vaccines that are sold to farmers at a subsidised rate. The subsidy discourages the private sector from investing in the development, manufacturing, marketing and distribution of vaccines in Pakistan.
There is a need for government to provide weighing machines in mandis (market places) so that animal values can be based on live-weight rather than on a per head basis. This will incentivise and reward farmers to invest in increasing the live-weight of their meat animals.

Public sector support for livestock for meat production in Pakistan is limited to the Agribusiness Support Fund (ASF), FAO and the Government of Punjab which support livestock production, meat processing and export marketing projects.

Some programmes have been targeting women’s involvement. The Dairy and Rural Development Foundation (DRDF) programme runs in conjunction with USAID and has Women Livestock Extension Workers that train and empower marginalised women farmers. USAID’s Entrepreneurs Project and the government’s Punjab Livestock and Dairy Development Board (PLDDB) have supported women entrepreneurs to provide veterinary services to livestock farmers.

There are opportunities for MDF to engage with the Pakistan Dairy Association and the All Pakistan Meat Exporters and Processors Association to identify priority issues in the sector and assist with the business environment.
MDF Approach

Pakistan has the fifth largest livestock population in the world, but does not go near achieving its potential in dairy and meat production and meeting domestic and export market opportunities. There are numerous reasons for this:

The sector is constrained due to a lack of organised supply chains and access to formal markets in production areas where processors have no presence.

The lack of access to formal markets translates into poor market information and low farm returns. Farming households do not have adequate knowledge of the quality of milk or meat animal required to improve prices and, since they earn less cash, they do not see any incentive in investing in livestock to improve the yield and quality of livestock products, namely, milk, meat and hides.

Limited investments in cold chain and new product development technology

Cold chains help milk processors collect quality milk from villages at a competitive price and reduce the wastage of milk. Cold chains are also required for distribution and retailing of improved quality meat products. Due to increasing costs and a low availability of grid electricity, investment in rolling out cold chain logistics has risen dramatically, as have operating costs.

In the meat supply chain, the lack of cold chains encourages same day slaughter and sales through local retail operations, with no quality control. The absence of cold storage facilities at air freight stations, as well as no vacuum packaging for shipping, leads to deterioration of export meat quality.

Livestock farmers have limited access to inputs and limited information on input benefits and this situation adversely affects livestock productivity.

Almost all livestock farmers suffer from a lack of access to inputs and knowledge of the benefits of appropriate husbandry and nutrition inputs. This is acute in locations where milk processors/collection centres are not active.

Lack of knowledge of animal husbandry affects productivity. Extension services are only available in areas where formal processors are rolling out their cold chains. This could be addressed with advice from farm extension workers, but this service is only available in areas where formal processors have cold chains.

These problems are exacerbated for female farmers who do not have direct access to extension services and are not able to purchase inputs from the town market themselves.

Limited access to finance for inputs, consumption and reinvestment

Small farmers are heavily dependent on middlemen as a source of finance. The middleman is often also the provider of advice and inputs, however this does not necessarily lead to optimal outcomes.
for the farmer as the middleman’s interest is principally in the trading margin and not the quality of produce.

Farming households do not have access to formal financial services as the penetration rate of these services is low for the country (only 10 percent of the population has a bank account). Access is more problematic for rural populations and for women.

Access to finance for private businesses to engage in processing activities (such as the roll out of cold chains) or to purchase better quality inputs and information is constrained by the limited financial products available in the market.

Livestock farming is characterised by a lack of formal market access for male and female farmers, low market information, inadequate production inputs, insufficient husbandry knowledge, lack of finance, low yields and ultimately low earnings.

Regardless of these constraints, the livestock sector in Pakistan is progressing. Milk processors are supplying formal markets with a range of quality dairy products. Meat exports are occurring and increasing. Both the formal and informal domestic retail sectors continue to grow and require a wider range of improved livestock products.

Development efforts focused on: a) improving access for male and female farmers to developing markets, husbandry knowledge, input markets, and market information to increase supply linkages to the formal channel, b) reducing wastage of quality products, and c) increasing investments in the value chain, are most likely to result in increased economic growth, employment and improvements in household incomes.

MDF will add value to these development efforts by engaging at different points along the various Dairy and Meat value chains so as to connect male and female farmers with formal processors and the markets, and to create strong backward and forward linkages. This will increase opportunities for farmers to earn more income and improve their ability to invest in their animals and household wellbeing. This will be a demand-driven process in which formal processors, manufacturers, collectors and traders will be able to source improved livestock products more efficiently from the rural producers and, on the other hand, inputs producers and suppliers will be able to supply quality inputs to rural farmers. This process requires support services to create access to market information and to husbandry advice and information to increase the productivity of the livestock herds.
Addressing constraints and taking advantage of opportunities will involve:

- Enabling farming households to sell their products (milk and meat) to the formal market and thus generate additional income. This could be through connecting processors directly, or through third party collectors, with male and female farmers in the rural areas.

- Introducing and promoting the use of high quality inputs for better animal productivity (formulated feed, hybrid fodder seeds, silage, vaccines and medicines) to farming households in areas where they are not in use.

- Providing husbandry information through e.g. extension services, BMOs, embedded services and ICT/media to both male and female farmers thus supporting them to improve their yields.

- Improving access to formal financial services (including credit, savings, insurance and other financial asset management products) for both male and female farmers, as well as improving the availability of financing for small and medium agriculture-based businesses.

- Improving infrastructure around processors (such as collection, processing, storage and transportation) to reduce the cost, and increase the volume, of local sourcing, particularly from remote rural areas.

The ultimate vision for the sector is that, with incentives from exporters and processors, farmers will invest more in their livestock, increase their production and earn higher incomes resulting in a more vibrant dairy and meat sector.

To achieve this, MDF will identify partners who have the ability and incentive to invest in business expansion and innovative business practices and who will address the key constraints to functioning market systems.

Table 1 below lists these key constraints (as identified through a sector assessment) and summarises the reasons for their existence.

Table 2 translates these constraints into market opportunities and identifies potential partners with whom MDF could partner to capture these opportunities. Potential partners include formal processors, exporters, input manufacturers, retailers, traders, wholesalers, distributors, cold chain operators, telecom providers, media channels, financial institutions, as well as public sector organisations that shape the business environment around these actors.

Table 3 provides the strategy for MDF’s activities in dairy and meat.
Key Constraints

As summarised above, the livestock market system in Pakistan has several key constraints ranging from low productivity (through low usage of inputs and lack of information on husbandry practices) to a nascent formal industry (for meat).

MDF has identified five major constraint areas hindering the development of Dairy and Meat operations in Pakistan. These constraints are elaborated in detail in the table below. Note that ‘special interest areas’ do not refer to a separate constraint, but to areas in which a number of constraints come together. These are areas in which MDF will make a special effort to identify sustainable solutions.

Table 1: Summary of the constraint areas in Dairy and Meat

<table>
<thead>
<tr>
<th>Constraint area</th>
<th>Explanation and Causes</th>
</tr>
</thead>
</table>
| 1. Production is poorly connected to growth markets; new supply chains are growing but are ‘thin’; most production still goes into traditional markets. | Dairy:  
- The dairy revolution started almost a decade ago, triggered by government initiatives such as the sales tax zero rating status.  
- Earlier there were refrigerators at the individual collection and retail points; processors were small and bought milk from the middlemen.  
- Nestle commenced setting up its own cold chain in 2003 and now has around 3,000 chillers operational. Both Engro and Shakarganj diversified into dairy in 2005, and now have 2,000 and 24 chillers respectively.  
- The same decade witnessed the trend of diversification into large commercial dairy farms by textile owners and other large industrialists.  
- Investments in pasteurised milk are a very recent phenomenon. It is only sold in the large cities owing to the challenges of creating a new market as well as the requirements of a cold chain for storage and retail purposes.  
- Only five percent of milk is collected through formal supply chains; setting up cold chains is capital intensive.  
- The formal dairy sector has been growing at 20 percent annually over the last decade and is expected to grow at 8-10 percent per annum over the next decade.  
- There is much growth potential in the domestic market due to growing awareness, rising incomes, urbanisation and a growing middle class.  
- This industry is largely focused on the domestic market, as export quality milk is not produced owing to the presence of aflatoxins. |
| Meat: |  
- Organised supply chains in meat production (beef and mutton) do not yet exist.  
- In beef and mutton there are only 24 processing SMEs active; they handle less than five percent of the meat sold in the market (four percent for export and one percent for the local market).  
- The first international supermarkets (Metro and Carrefour) only opened up in Pakistan in 2007; before that all meat was bought from the traditional butchers.  
- Pakistan has a niche industry of exporting fresh chilled carcasses of young animals to Gulf Cooperation Council (GCC) and other countries, but it is unable to export to Europe and other lucrative markets owing to foot-and-mouth disease (FMD) status, lack of traceability in the supply chain, and the absence of vacuum packaging technology in the country. Locally, as well, companies like McDonald’s and Hardees import traceable meat to fill their orders.  
- The unique selling proposition (USP) of Pakistan is Halal meat as it is the only Muslim country with a large population of large and small ruminants. However it is unable to exploit its potential as the formal supply chain is still at its infancy stage.  
| In each of the points above, the female members of the household are less likely than their male counterparts to be involved in market transactions. |
### Constraint area

#### 2. Limited access to quality inputs.

<table>
<thead>
<tr>
<th><strong>Dairy:</strong></th>
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</thead>
<tbody>
<tr>
<td>Good quality inputs are only available in areas where milk processors operate.</td>
</tr>
<tr>
<td>Farmers often purchase locally manufactured inputs from the grain market <em>(mandi)</em> in a nearby town.</td>
</tr>
<tr>
<td>Branded inputs have limited outreach in terms of marketing, and their distribution network is limited to bigger settlements.</td>
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<tr>
<td>Companies are typically reluctant to provide goods on credit to the smaller distributors or retailers operating at the village level.</td>
</tr>
<tr>
<td>Distribution is also curtailed by the difficulty in transporting goods to distant areas as transportation costs outweigh net profits.</td>
</tr>
<tr>
<td>Lack of availability of quality inputs inside the village implies that women will be unable to purchase any of the inputs themselves and are dependent on men to purchase them from the town market. This could mean that women are unaware of the product variety available in the market.</td>
</tr>
<tr>
<td>Hybrid seeds for fodder and specialised feed are not commonly used by farming households. This particularly applies to <em>wanda</em> (formulated feed) which is less popular than <em>khal</em> (cotton seed cake).</td>
</tr>
<tr>
<td>Government subsidised, locally manufactured, and imported vaccines are available, but the quantity is so low that it serves only a small percentage of the animal population. Subsidised government supply discourages private investment in importing or local manufacturing. Vaccines may not contain the serotypes relevant to the local strains of the disease. Vaccines may be of a low quality, or deteriorate due to the lack of cold chain security.</td>
</tr>
<tr>
<td>Artificial insemination is mostly practised by smallholder farmers in areas where formal milk processors operate. Most use cheaper local semen. Use of imported semen is hampered by fraudulent practices. Farmers fear losing money when the animal does not conceive. Imported breeds can be found on large commercial dairy farms, but small farmers cannot afford to provide the conditions in which pure foreign breeds can thrive.</td>
</tr>
<tr>
<td>Government vets are missing in action in most places, and private practitioners are often poorly qualified para-vets with a simple diploma or some experience without a degree.</td>
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</table>

#### 3. Limited access to information and production know how (inputs, husbandry knowledge) for the smaller farmers, male and female.

<table>
<thead>
<tr>
<th><strong>Meat:</strong></th>
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<tr>
<td>Meat is a by-product of dairy farming; small farmers are not inclined to invest in fattening male calves.</td>
</tr>
<tr>
<td>Feed aside, inputs for dairy and non-dairy animals are the same.</td>
</tr>
<tr>
<td>Specialised inputs, feed in particular, are likely to be used by large farmers only for fattening male animals for Eid.</td>
</tr>
<tr>
<td>Specialised inputs are also used by a few organised feed lots that supply the processors.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Explanation and Causes</strong></th>
</tr>
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<tbody>
<tr>
<td>The government-provided extension services have little impact/influence.</td>
</tr>
<tr>
<td>Input companies provide extension as an embedded service, but they only target the large commercial farmers and have limited staff numbers.</td>
</tr>
<tr>
<td>Milk processors provide extension services, but they also only target the large farmers and their outreach is limited to the areas where formal milk collection takes place through the chillers.</td>
</tr>
<tr>
<td>Male extension workers may not be able to talk to female farmers directly, and women may have lower access to other forms of information such as television or cell phones.</td>
</tr>
<tr>
<td>Vets are a common source of information for farmers, but they may or may not be the most knowledgeable resource.</td>
</tr>
<tr>
<td>Government mobile teams that administer vaccinations are not trusted by the farmers as they come only once or twice a year.</td>
</tr>
<tr>
<td>Most farmers tend to follow the practices used by the local landlord or their neighbours, friends and relatives. Hence traditional practices may continue to be followed in the absence of external intervention.</td>
</tr>
<tr>
<td>Constraint area</td>
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<td>-----------------</td>
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<tr>
<td>4. Lack of formal financial institutions restricts access to finance for inputs, consumption and reinvestment.</td>
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<tr>
<td>5. Rules and regulations</td>
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</table>

**Special attention areas**

| Market access for landless farmers | Livestock farming is practiced by the smallest and landless farmers (they have no grazing land and source fodder externally, free-graze or dry feed livestock). They have only a single source of income and are dependent on middleman for credit which is paid when their produce is sold, therefore they have no produce to sell through the formal channel. They then need credit to buy staple food such as wheat from the market.<br>• Limited access to inputs because of affordability results in low farm level productivity and low income. |
| Female farmers | • In most households women are involved in animal husbandry practices such as milking, feeding, providing water and cleaning the animals, however, they are not directly involved in market transactions, including the sale of milk or meat, or purchase of inputs, owing to social constraints on mobility. Though they may not receive cash directly, women are involved in joint decision-making regarding household expenditures.<br>• Women are not able, due to social norms, to interact directly with a male extension worker or veterinarian, and are dependent on male household members for getting information. The employment of women extension workers, vets or input retailers is rare.<br>• Formal finance is difficult for male farmers to access, but it is more so for female members of the household.<br>• The two major hindrances in the sector are restrictions on mobility and the prestige associated with the women of the household not working and not talking to male strangers. |

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Remote regions

Sheep are abundant in Balochistan, however:
- It is too far from formal industry to allow for effective participation in the market without incurring huge costs when transporting to urban centres.
- This means that large distances to travel to producers and poor communications contribute to high sourcing costs for traders and processors.
- It has a relatively low population density that is thinly spread out and a low level of formal industry involvement compared to the rest of the country.

Safe and socially responsible working conditions

- Formal enterprises in the supply chains are observed to reasonably comply with safe and socially responsible working conditions.
- Child labour, poor pay rates, and unsafe working conditions can be observed throughout the informal supply chains.

Opportunities to Address Key Constraints

MDF’s strategy in Dairy and Meat will involve building a portfolio of partnerships with businesses in intervention areas corresponding to the identified constraint areas. In Table 2, constraint areas have been translated into intervention areas. For instance, lack of husbandry information among small farmers was identified as a constraint. As a result, MDF’s strategy will focus on working with formal processors, input manufacturers, telecommunication companies, media, traders and others to provide information to farmers so as to increase yields and income.

Table 2: Intervention areas and potential opportunities to reduce constraints

<table>
<thead>
<tr>
<th>Intervention area</th>
<th>Opportunities</th>
</tr>
</thead>
</table>
| 1. Investment in establishing or expanding an organised supply chain connecting producers to growth markets (urban and/or export) | **Dairy:**
- Support collectors, milk processors and retailers to:
  - Expand their cold chains, so that farmers can sell milk consistently and at a higher price/volume
  - Invest in development of production techniques and (value added) products that increase demand for local milk (and substitute for imports)
  - Develop cold chains for retailing of pasteurised milk
  - Support local collectors to establish cold chains to supply quality milk directly to retailers or processors
  - Explore means to integrate women more directly in commercial exchanges.
**Meat:**
- Support traders, feeders, processors and exporters to:
  - Establish backwards linkages to farmers and develop traceability mechanisms
  - Establish/expand feed lots
  - Produce specialised cuts (for the local and export market)
  - Gain access to climate-controlled cargo terminals for the export of the chilled carcasses
  - Improve packaging (e.g. vacuum packaging) to increase the shelf life (for export)
  - Develop new export markets (beyond GCC) or move into new market segments
  - Market locally produced meat to retailers and restaurants instead of importing it. |
<table>
<thead>
<tr>
<th>Intervention area</th>
<th>Opportunities</th>
</tr>
</thead>
</table>
| 2. Investment in establishing or expanding the availability of inputs (i.e. production, distribution and affordability), connecting smaller producers to input markets. | **Dairy:**  
> - Support input manufacturers (of hybrid seeds and specialised feed) to establish and expand distribution networks to smaller farmers.  
> - Involve processors in establishing input retailers in milk collection areas targeting smaller dairy farmers.  
> - Develop entrepreneurs for silage making and setting up their distribution networks.  
> - Support drug companies in manufacturing vaccines locally according to the local strains.  
> - Support vaccine companies to develop a cold chain for distribution, so that the quality of medicines does not deteriorate  
> - Explore ways to ensure improved access to inputs for women and make them more knowledgeable about newer products available  

**Meat:**  
> - Support specialised feed manufacturers to establish and expand distribution networks to small farmers.  
> - Other inputs for Meat are the same as for Dairy (see above). |
| 3. Access to information and production know-how (inputs, husbandry knowledge) for the smaller farmers. | **Dairy:**  
> - Partner with processors to disseminate information on livestock management practices to small farmers in milk catchment areas.  
> - Support input manufacturers to provide husbandry knowledge as an embedded service to farmers.  
> - Work with telecom providers to ensure affordable access to information for livestock farmers both male and female.  
> - Help media channels develop programmes on livestock management as they are likely to reach female audiences.  
> - Partner with entities to provide female extension services.  

**Meat:**  
> - Work with processors to spread information on fattening animals and raising calves.  
> - Work with institutional buyers to lay the foundation of traceability in the country. |
| 4. (Access to) finance for inputs, consumption and reinvestment |  
> - Work with processors to provide alternative payment mechanisms to farmers, such as mobile money.  
> - Work with commercial banks and microfinance banks to increase the geographical outreach of their operations and increase the number of women clients. These entities should be able to provide credit, insurance and savings products to farmers. Their cost of operations can be lowered by employing technological innovations.  
> - Work with commercial banks and microfinance banks to provide innovative financial products for agriculture processing and inputs. |
| 5. Rules and regulations |  
> - Implementation of proposed pasteurisation laws needs to be made appropriate and relevant to the realities of the market and not impact on producer dairy prices.  
> - Subsidised vaccinations should be replaced by incentives for private producers of vaccines in the form of tax breaks, subsidies and low interest loans.  
> - There is a need to provide weighing machines in markets for meat animals in order to incentivise farmers.  
> - Sector subsidies and rebates need to be structured to foster progressive growth, efficiency and competitiveness rather than causing negative impacts on growth in the sector.  
> - Government needs to be aware that its steps to curtail smuggling of live animals has impacts on livestock values, in the form of making borders less porous, and to ensure strict law enforcement. |
<table>
<thead>
<tr>
<th>Intervention area</th>
<th>Opportunities</th>
</tr>
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</table>
| Enhanced market access to landless farmers             | • Increase income by ensuring landless farmers get better prices through formal channels.  
• Work with financial institutes to provide a credit facility to smaller farmers.  
• Work with different market players to ensure female-headed households enjoy market access. |
| Improved access to markets, inputs, information, finance, employment opportunities and labour saving aids for women | • Ensure better access to markets, processors and formal buyers for households engaged in Dairy and Meat farming.  
• Support input manufacturers to expand their distribution networks so that women can access varieties of fodder and feed that can reduce their workload e.g. silage.  
• Improve the flow of information to female farmers directly by experimenting with alternative models of information delivery such as female extension workers/vets, media, ICT and BMOs.  
• Work with financial institutions including commercial banks and microfinance organisations to offer products tailored to women.  
• Explore opportunities with partners to employ women in different capacities wherever possible such as extension workers and vets. |
| Improved market access to remote regions               | • Connect farming households with formal processors who pay for transportation and storage costs while benefiting from the relatively lower priced produce.  
• Improve distribution networks to ensure availability of inputs in remote areas in order to improve farm level productivity.  
• Provide information to male and female farmers about husbandry practices. |
| Safe and socially responsible working conditions       | • Assess compliance and assist MDF partners to embed safe and socially responsible working conditions into their business practices. |
### Sector Growth Strategy for Dairy and Meat

Based on the constraints and opportunities described above, the following strategy was formulated for MDF’s work in Dairy and Meat (Table 3).

#### Table 3: Sector growth strategy for Dairy and Meat

<table>
<thead>
<tr>
<th>Intervention area</th>
<th>Markets to be influenced</th>
<th>Anticipated results if markets start to work better</th>
<th>Contribution to WEE Domains (if applicable)</th>
<th>Potential partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investment in establishing or expanding an organised supply chain connecting male and female producers to growth markets (urban and/or export).</td>
<td>Dairy: Male and female farmers sell milk consistently at higher prices and volume at the farm gate to formal processors of ultra-high temperature (UHT) processed or pasteurised milk having backward linkages. Formal processors increase their production, sales and retailing capabilities of UHT milk, pasteurised milk and value added products, which increases the demand for fresh milk and reduces import of dairy products.</td>
<td>Improved access to markets + less wastage + less costs &gt;&gt; higher production volume, more sales, better margins &gt;&gt; higher enterprise income &gt;&gt; improved ability to pay premium for raw materials and increased employment &gt;&gt; more money for male and female farmers and employees for household needs and re-investment.</td>
<td>As a result of the interventions in these areas, it is anticipated that women may enjoy improved market access (Domain 5) for their dairy and meat products, thus improving their incomes (Domain 1). This will allow women to have a greater choice of buyers to sell to, and they are also involved in joint decision making on household expenditures (Domain 2). They will also benefit from improved return on effort (Domain 3).</td>
<td>Formal milk and meat processors, retailers, transporters, collectors, traders, <em>dodhis</em>, <em>beoparis</em>, livestock buyers and associations.</td>
</tr>
</tbody>
</table>
**Goal:** To increase farm productivity and income by increasing access to inputs and services, reducing production costs, marketing costs and wastage, stimulating investment in sourcing, trade-related infrastructure and processing capacity, and creating a better business enabling environment.

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<tr>
<td>2. Investment in establishing or expanding availability of inputs (i.e. production, distribution and affordability), connecting smaller producers (male and female) to input markets.</td>
<td>Male and female farmers have better access to high quality inputs, such as specialised feed, hybrid seeds, silage and vaccines as well as veterinary services that help to improve farm level productivity. Local input manufacturers invest in manufacturing and distributing affordable inputs, supported by formal processors.</td>
<td>Improved distribution of inputs &gt;&gt; increased use of inputs &gt;&gt; higher productivity &gt;&gt; sales &gt;&gt; higher incomes &gt;&gt; farming becomes commercially more attractive &gt;&gt; higher re-investment.</td>
<td>As a result of interventions in these areas, it is anticipated that women may enjoy improved access to inputs (Domain 5) therefore having greater opportunities to decide on their choice of inputs (Domain 2) and also increasing their incomes (Domain 1). Some inputs can also help reduce workloads for women (Domain 3) by saving time spent in chopping fodder and precluding the need for carrying it on their heads over long distances.</td>
<td>Seed companies, feed companies, silage entrepreneurs, drug manufacturers/importers, formal processors and retailers.</td>
</tr>
<tr>
<td>3. Access to information and production know how (inputs and husbandry knowledge) for the smaller farmers, both male and female.</td>
<td>Male and female farmers have better access to information through private sector extension workers hired by formal processors, embedded services provided by retailers and input manufacturers, and media and mobile phone applications.</td>
<td>Better access to information &gt;&gt; better yield &gt;&gt; more sales &gt;&gt; higher incomes &gt;&gt; farming becomes commercially more attractive &gt;&gt; more money for re-investment or household needs.</td>
<td>As a result of the interventions in this area, it is anticipated that women may enjoy improved access to husbandry information (Domain 5) thus having greater opportunities to increase yields and incomes (Domain 1). Better access to information will also strengthen their influence and decision making inside the household (Domain 2). Introduction of female extension workers will lead to employment creation for women (Domain 4).</td>
<td>Formal processors, input companies, telecom service providers, media channels, BMOs, associations and cooperatives.</td>
</tr>
<tr>
<td>4. (Access to) finance for inputs, consumption and reinvestment, for both male and female farmers and for agricultural businesses.</td>
<td>Male and female farmers have better access to finance: credit for expenditures (farm and household), insurance for animals, and savings for reinvestment, supplied by commercial banks and microfinance banks. Male and female farmers also take advantage of mobile</td>
<td>Better access to finance for farmers and agri-businesses &gt;&gt; more options to sell produce &gt;&gt; higher prices &gt;&gt; higher incomes &gt;&gt; higher savings &gt;&gt; more money for re-investment or</td>
<td>As a result of the interventions in this areas, it is anticipated that women may enjoy improved access to finance (Domain 5), thus having greater opportunities to invest and reinvest and increase their incomes (Domain 1). Women will</td>
<td>Formal processors, commercial banks and microfinance banks.</td>
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**Goal:** To increase farm productivity and income by increasing access to inputs and services, reducing production costs, marketing costs and wastage, stimulating investment in sourcing, trade-related infrastructure and processing capacity, and creating a better business enabling environment.

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<tr>
<td><strong>5. Rules and regulations</strong></td>
<td>money and other innovations through the formal processors. Businesses have access to finance for agriculture processing such as cold chain development for dairy, producing silage and other nutritious fodder and for investing in feed finishing models.</td>
<td>household needs + greater resilience to financial shocks.</td>
<td>also benefit from greater independence and improved negotiating power as a result (Domain 2).</td>
<td>Private investors (importers, distributors, local and foreign manufacturing companies), government institutions, development agencies, BMOs and cooperatives.</td>
</tr>
<tr>
<td><strong>Special attention areas</strong></td>
<td>Formulation of well-structured and sound implementation, of government rules, regulations and incentives can help to trigger growth activity in Dairy and Meat thereby generating increased economic activity around these industries.</td>
<td>Business enabling environment around enterprises improves &gt;&gt; reduced costs and risk of doing business &gt;&gt; more investment &gt;&gt; more sales &gt;&gt; more employment &gt;&gt; higher incomes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhanced market access to landless farmers, both male and female</td>
<td>Landless farmers (male and female) can sell higher volumes at better prices by being connected with formal processors that also provide transportation and storage. They can access inputs, finance and husbandry information, which increases productivity and hence incomes.</td>
<td>Improved access to markets &gt;&gt; access to inputs, finance and information for male and female farmers &gt;&gt; higher yields &gt;&gt; more sales, better margins &gt;&gt; higher net incomes &gt;&gt; more money to invest in agriculture or household needs.</td>
<td>As a result of the interventions in this area, it is anticipated that landless female farmers may enjoy improved access to market, thus having greater opportunities to increase their incomes, thereby impact may be around Objectives 1 (income) and 3 (service). It is expected that women will be able to increase incomes if they get direct market access.</td>
<td>All above</td>
</tr>
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Goal: To increase farm productivity and income by increasing access to inputs and services, reducing production costs, marketing costs and wastage, stimulating investment in sourcing, trade-related infrastructure and processing capacity, and creating a better business enabling environment.

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<tr>
<td>Improved market access to remote regions</td>
<td>The above extended to remote regions.</td>
<td>Improved access to markets &gt;&gt; access to inputs, finance and information for male and female farmers &gt;&gt; higher yields &gt;&gt; more sales, better margins &gt;&gt; higher net incomes &gt;&gt; more money to invest in agriculture or household needs.</td>
<td>Same as above.</td>
<td>All above.</td>
</tr>
<tr>
<td>Safe and socially responsible working conditions</td>
<td>Embedding of socially responsible business (ESRB) practices in enterprise operations.</td>
<td>Improved compliance with ESRB principles leading to safer and improved working conditions for employees.</td>
<td>MDF Partners.</td>
<td></td>
</tr>
<tr>
<td><strong>Cross-cutting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td>Cross-cutting – inclusive in above</td>
<td>More sales, better margins &gt;&gt; higher net incomes &gt;&gt; more money to invest in agriculture or household needs.</td>
<td>All above</td>
<td></td>
</tr>
<tr>
<td>Women’s Economic Empowerment (WEE)</td>
<td>Women enjoy improved access to markets, inputs, information, finance, employment opportunities and labour saving aids.</td>
<td>Women enjoy access to inputs, information and finance &gt;&gt; greater employment for women, lower workloads and increased yields + market access &gt;&gt; higher income and higher reinvestment &gt;&gt; &gt;&gt; additional income at the disposal of women from livestock farming + improved decision making</td>
<td>Domains 1 to 5</td>
<td>All above</td>
</tr>
<tr>
<td>Disability</td>
<td>Cross-cutting</td>
<td>Opportunities identified on a case by case basis in those areas where additional employment is created.</td>
<td></td>
<td>All above</td>
</tr>
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</table>
Relevance for Pro-Poor Growth

Around 35 million small rural households are dependent on livestock for their livelihoods. Small farmers are poorly connected with formal markets, and access to input markets and services is low, resulting in low yields, high operating costs, wastage, low volumes of sales, low incentives and ultimately low earnings, which reduces their motivation for reinvesting in livestock. The purpose of the above-mentioned intervention areas, potential market opportunities, and ideas behind interventions, is to improve the livelihoods of small poor farmers. This will be achieved by providing opportunities to connect them to the formal markets, increasing their yields, providing access to input markets and supplying information on husbandry practices, so as to increase their margins and investment capacity.

MDF seeks to mitigate the above-mentioned constraints by designing and implementing commercially sustainable interventions with business partners to increase the incomes of, and generate employment for, the rural and urban poor.

Pro-poor results are defined, and will be measured, as follows:

- Additional income from livestock farming for male and female farmers as a result of being able to sell higher quantities at higher prices due to an increase in yields, and by virtue of being connected with the formal markets.
- Additional employment opportunities in livestock-related businesses including: milk processors, collection agents, traders, meat processors, butchers, input manufacturers, retailers, wholesalers and transporters.
- Increased income for landless farmers through being connected with the formal markets, thereby getting higher prices for their produce and enhancing their yields.
- Income and employment opportunities will be created in remote regions and in lower socioeconomic groups in urban areas in Pakistan.
- Having higher incomes results in investments in household wellbeing as well as higher rates of reinvestment on the farm.

MDF is finalising in-depth research on poverty in Pakistan to identify specific causes and pathways out of poverty, the outcomes of which will be incorporated into the sector growth strategy described above.
Relevance for cross-cutting themes

Contribution to Women’s Economic Empowerment

MDF analyses WEE according to the following five domains:

**Overall objective:**

1. Economic advancement.

**Improved access:**

2. Decision-making authority and influence in different spheres, including household finances and trade relations.

**Stronger agency:**

4. Access to opportunities and life chances such as skills development or job openings.
5. Access to assets, services and needed supports to advance economically.

These domains inform the areas to be assessed during sector analysis, results measurement visits, and when designing current and future partnerships. In addition to results measurement and periodic assessments for individual partnerships, MDF has conducted an in-depth household survey, referred to as the Poverty and Gender Study, to strengthen and improve the understanding of the sector. The information from these studies feeds into the sector strategy and the design of partnerships.

In the Dairy and Meat sector, it has been found that women are ‘invisible’ actors. As mentioned, women are involved in animal husbandry practices, yet they are not directly involved in cash transactions, such as sales of milk or meat, the purchase of inputs or accessing formal finance. Yet they are involved in decision making on household expenditures. They are also unable, for cultural reasons, to interact with male extension workers or veterinarians, and are dependent on male household members for getting information. Major hindrances are: societal restrictions on the mobility of women, and the prestige associated with having women in the household who do not work and do not interact with men.

MDF intends to work around these constraints by: a) employing alternative delivery mechanisms in addition to conventional ones and working with partners to identify business incentives to include women; and b) involving multiple stakeholders in varying capacities with different motivations to engage women.

MDF will ensure better market access for households engaged in livestock farming. It will help input companies and distribution companies increase their outreach so that women can access equipment and inputs (such as silage) that can reduce their workloads or increase their return on labour. It aims
to improve the flow of information to female farmers by experimenting with alternative models of information delivery such as via female extension workers and vets, the media, ICT, and BMOs. It seeks to partner with financial institutions to offer credit and savings products targeted to women. Finally it will continue to explore opportunities with partners to offer employment to women wherever feasible and appropriate.

MDF will collect and report gender-disaggregated data on its outreach to target beneficiaries as well as the additional income and employment opportunities generated through its interventions.

**Socially Responsible Business**

In Dairy and Meat interventions MDF will promote socially responsible business practices, including accommodating the needs of people with disabilities to enable their meaningful participation in the sector. In particular, attention will be given to ensuring that safe working conditions, environmentally friendly business operations, the absence of child labour, and adequate compensation for women are addressed in the business practices of MDF partners.