

# DAIRY PROJECT

Quarterly Progress Report

April – June 2014



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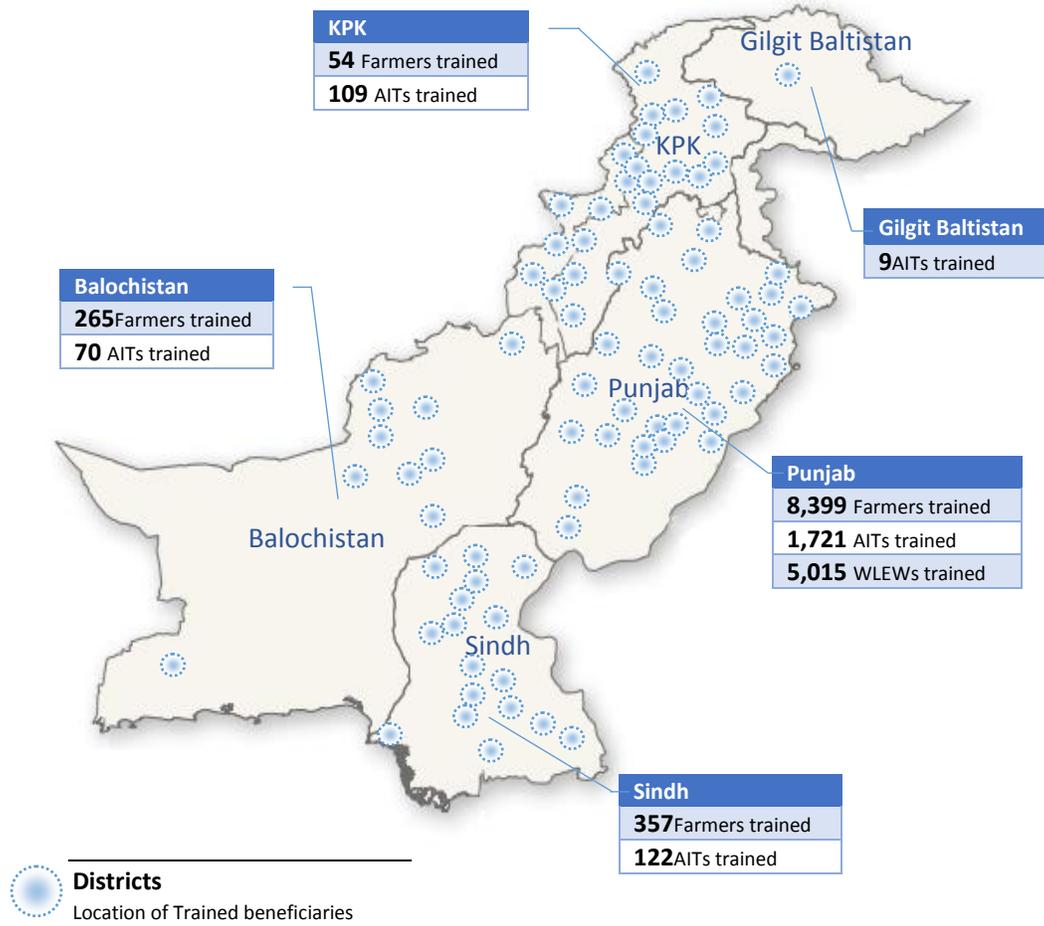


**Input:**

Over **300** dairy training and awareness classes provided people from rural areas of **90** districts.

**Output:**

Over **16,000** trained beneficiaries making dairy farming sector efficient and providing extension services.



**Outcome:**

**21%** increase in milk yield of dairy animals

**89%** of the trained farmers adopting more than three best practices for dairy farming

**5,200** young unemployed men and women set up their own businesses

**Impact:**

Increase in productivity of the dairy sector

Increase in trained farmer's average monthly income by **PKR. 6,000**

WLEWs and AITs earning average monthly income of **PKR. 1,150** and **PKR. 6,800** respectively

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## List of Acronyms

<b>AI</b>	Artificial Insemination
<b>AITs</b>	Artificial Insemination Technicians
<b>AOR</b>	Agreement Officer's Representative
<b>BOG</b>	Board of Governors
<b>BRSP</b>	Balochistan Rural Support Programme.
<b>DRDF</b>	Dairy and Rural Development Foundation
<b>EMPP</b>	Environmental Monitoring Program Plan
<b>FOM</b>	Field Operations Manager
<b>FROS</b>	Female reproductive organs
<b>GM</b>	General Manager
<b>LBEs</b>	Livestock Business Entrepreneurs
<b>LHW</b>	Livestock Health Worker
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MSI</b>	Management Systems International
<b>MTs</b>	Master Trainers
<b>NGO</b>	Non-Governmental Organization
<b>PD</b>	Project Director
<b>PMU</b>	Project Management Unit
<b>QPR</b>	Quarterly Progress Report
<b>RFP</b>	Request for Proposal
<b>SMs</b>	Social Mobilizers
<b>TOR</b>	Terms of Reference
<b>TOTs</b>	Training of Trainers
<b>UAF</b>	University of Agriculture Faisalabad
<b>US</b>	United States
<b>USAID</b>	United States Agency for International Development
<b>UVAS</b>	University of Veterinary & Animal Sciences
<b>VTIs</b>	Vocational Training Institutes
<b>WLEWs</b>	Women Livestock Extension Workers

## Executive Summary

The Dairy Project is a three year intervention. It is a joint effort of the United States Agency for International Development (USAID) and Dairy and Rural Development Foundation (DRDF) to enhance rural incomes by increasing livestock productivity. The project has provided training to 9,000 dairy farmers and 100 farm managers in best dairy practices to help them increase milk productivity that will eventually lead to increase in their income. The project has also provided training to 2,000 rural, unemployed young men as Artificial Insemination Technicians (AITs) and 5,000 rural, unemployed young women as Women Livestock Extension Workers (WLEWs) to assist dairy farmers by providing them quality extension services. The Dairy Project helps in establishing AITs and WLEWs as entrepreneurs once they are trained and certified by the University of Veterinary and Animal Sciences (UVAS), Lahore.

The project has reached the end of its initial timeframe and has achieved all the training targets. In the reporting period, April to June 2014, training was provided to farmers only as training targets for WLEW and AITs have been achieved previously. A hundred and seventy (170) farmers under went four-day training in Sukheki farm. The estimated milk yield of animals owned by project trained farmers has increased. This increase in yield varies with the season and ranges from 10 to 19 percent. The project trained AITs earn an average monthly profit of PKR. 7,027 and WLEWs earn PKR. 1,524. However, with the passage of time WLEWs are proving themselves in their line of work and gaining the trust of farmers, which will help to boost their incomes in the near future. The Dairy Project is also continuing with strict environmental compliance and monitoring in its trainings. An environmental compliance report is given in annex-2

Figure 1: Quarterly Growth in the Number of Trained Beneficiaries

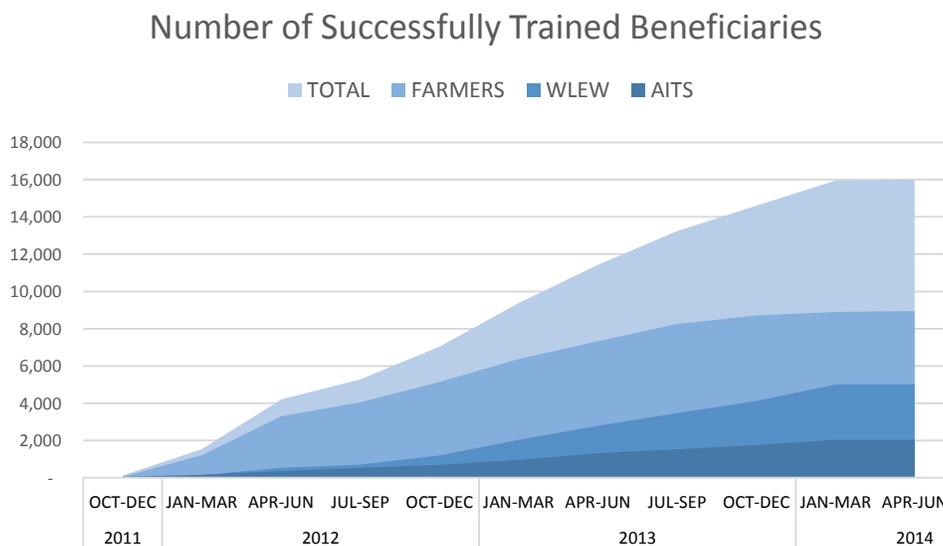


Figure 1 Quarterly Growth in the Number of Trained Beneficiaries

# Financials

## Aid for Sustainable Development

*“One of the best ways countries can combat poverty is to use development assistance to promote a growing private sector, in which the poor can fully participate.”*

**-John Danilovich, US Diplomat**

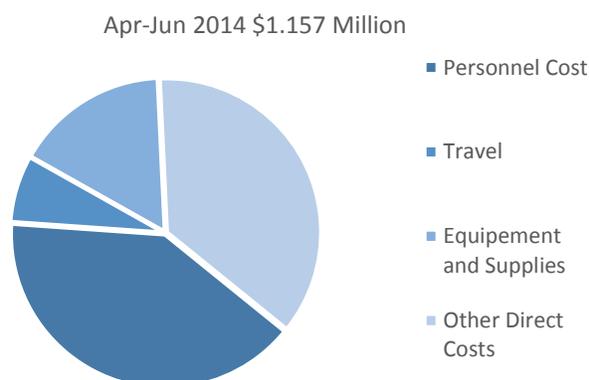
Table 1: Financial Summary

Description	Amount
Total estimated USAID amount	\$14,018,777
Amount obligated (As of June 30, 2014)	\$14,018,777
Leveraged amount (Non-Federal)	\$3,407,059
Total project funds expended to date (As of June end, 2014)	\$13,698,490
Project funds expended during the reporting quarter (April-June,2014)	\$1,157,045
Obligated project funds remaining	\$320,287
Project funds allocated for the next quarter (July-September,2014)	\$320,287

Table 2: Expenditure Summary

Expense Categories Under Cooperative Agreement	Expenditure during April-June 2014 (US \$)
Personnel Cost	466,007
Travel	81,422
Equipment and Supplies	186,395
Other Direct Costs	423,220
<b>Total</b>	<b>1,157,045</b>

Figure 2: Expenditure Distribution



## Progress & Performance

# Marching Forward

Due to the vital importance of the livestock sector in Pakistan, the Dairy Project with its extensive training programs for dairy farmers, Women Livestock Extension Workers (WLEWs) and Artificial Insemination Technicians (AITs) is playing an important role in transforming livelihoods of rural communities. The Dairy Project is being implemented in all four provinces, with a major focus on Southern Punjab within a time frame of three years (July 2011- July 2014).

This progress report describes the operations and progress of the project in the period April 2014 to June 2014. For a detailed overview of the project, please refer to annex 1.

### Training and Support for Dairy Farmers

Since the comprehensive target for the two-day training program and one-month farm managers training was fully achieved in previous quarters, the Dairy Project focused on the four day training program in this quarter. The Dairy Project provided four-day training to one hundred and seventy (170) dairy farmers at the Nestlé Sukheki/ Sarsabz training facility in April and May 2014. As of June 31, 2014, the Dairy Project has trained a total of 9,074 farmers. Table 3 illustrates the target and achievements for the quarter and table 4 shows the total number of farmers trained by training type in the last three years.

Table 3: Summary of Farmer Training

Indicator	Number Trained
Beneficiaries targeted during April-June 2014 <sup>1</sup>	210
Beneficiaries reached during April-June 2014	170
Beneficiaries targeted to date <sup>2</sup>	9,100
Beneficiaries reached to date	9,074
1. Quarterly targets are as per AIP 2013 2. Life of Project targets	

Table 4: Number of Farmers Trained by Training Type

Type of Training	Farmers Trained
Two-Day Training	5,118
Four- Day Training	3,538
One Month Training	418
<b>Total</b>	<b>9,074</b>

Table 5 below shows progress on indicators from the Monitoring and Evaluation Activity Plan. These indicators are calculated on the basis of a quarterly follow up survey, which were conducted on quarterly basis over the years. From these surveys combined averages and weighted averages of 4-quarters were calculated to get the average impact of the project over the year and to remove seasonality. Refer to annex 4 for detailed sampling and evaluation methodology of quarterly surveys conducted by Monitoring & Evaluation Department.

Table 5: Performance Indicators of Trained Farmers

Indicators	Targets	Achievement (Combined Average)	Achievement (Weighted Average)
Incidence of Hemorrhagic Septicemia (HS) and Foot and Mouth Disease (FMD) in: A) Dairy animals owned by project-assisted households and B) Dairy animals of farmers assisted by WLEW relative to the baseline	At least 20 percent reduction in the incidence on average.	Reduction in HS incidents: 45% Reduction in FMD incidents: 0%	Reduction in HS incidents: 63% Reduction in FMD incidents: 5%
Average monthly (per animal owned by project-assisted household) quantity of milk produced relative to the baseline	At least 10 percent increase in milk yield.	19percent	21 percent
Percentage of farmers using services of Women Livestock Extension Workers (WLEWs) relative to the baseline	At least 10 percent farmers using services of WLEWs.	17 percent	19 percent
Percentage of project-assisted farmers using at least three best practices relative to the baseline (disaggregated by farmers/farm managers)	60 percent farmers adopted three or more best practices	86percent	89percent
Number of villages reached with TV and/or Rk8radio sketches	At least 700 villages per year	Nationwide 88 districts and 238 tehsils were reached in Phase Two of the TV/Radio campaign	Nationwide 88 districts and 238 tehsils were reached in Phase Two of the TV/Radio campaign
Number of project-assisted farmers trained in business practices, and book-keeping	97.7per cent	100 percent	100 percent

The Dairy Project's intervention has had a positive effect on the dairy sector. The trained dairy farmers met all the impact targets aimed by USAID and the Dairy Project. About 89 percent of the beneficiaries have adapted at least three of the best practices taught to them in the trainings. This is a very encouraging response and adaption rate. It can be deduced that adoption of best practices has led to an increase of 19 percent in the daily milk yield. This translates into an average monthly increase of PKR 6,000 in the farmer's income. The WLEW component of the Dairy Project has also played an important role in benefitting the farmers. Gradually, the dairy farmers have started to trust the WLEWs and get their animals treated and vaccinated by our trained WLEWs. The adoption of best practices and timely vaccination from WLEWs has led to a reduction in the cases of HS and FMD diseases by 63 percent and 5 percent respectively.

Dairy Project's follow-up teams continued to disseminate awareness on silage preparation. Individual farmers within the community were visited and motivated to make silage. During the reporting period (April -June, 2014), more than 80 acres of fodder planted land was converted into silage through the project's silage campaigns, whereby 2,642 farmers participated in silage shows and observed the

process of silage making. Dairy Project's follow up teams continued to hold individual as well as group meetings with project-trained farmers, WLEWs and AITs to provide technical assistance. A total of 144 such community based inter-beneficiary meetings were conducted in this reporting period. Also, farmers had their animals treated free of charge at the farmer-help camps organized by the Dairy Project. These camps help introduce WLEWs to the wider farmer community, hence providing vital networking and training opportunities to the WLEWs. At these camps, all WLEWs worked under the supervision of project's master trainers. A total of 1,259 dairy farmers attended 28 farmer-help camps organized in April – June 2014.

Follow-up activities helped to ensure optimum use of the support kits received by the farmers and help them to adopt best dairy farming practices. Follow-up teams also provided technical support to the project-trained farmers at their respective farms, to educate them on shed designing and other technicalities regarding dairy farming and silage making.



## Training and Support for Artificial Insemination Technicians (AITs):

As the life of the project training target for AITs was achieved by the last quarter, no training took place in April – June, 2014. As of June 31, 2014, a total of 2,032 AITs have been trained by the Dairy Project. Moreover, motorbikes were distributed to 246 AITs, including 95 from Khyber Pakhtunkhwa, upon satisfactory fulfillment of the criteria set out by the Dairy Project. Bike evaluation survey in Baluchistan and Skardu has been completed and 35 AITs have qualified to receive the bikes in these areas. In the coming months another 140 AITs would receive bikes. This would include 31 AITs from Baluchistan, 2 from Sindh, 4 from Gilgit Baltistan and 103 from Punjab. To date, the project has awarded 1,497 bikes to trained AITs.

Table 6: Summary of Motorbiked Distribution

Province	Distributed (Apr-June, 2014)	To be distributed (August, 2014)
Khyber Pakhtunkhwa	95	0
Punjab	151	103
Baluchistan	0	31
Sindh	0	2
Gilgit Baltistan	0	4
<b>Total</b>	<b>246</b>	<b>140</b>

Furthermore, a total of 3 induction meetings were conducted by master trainers to introduce the newly trained AITs within their communities. These meetings were attended by 63 community farmers.

The Dairy Project's follow-up team continued its activities and organized monthly meetings in different localities to provide follow-up support to trained AITs. More than 300 AITs benefited from such meetings. AITs that were initially lagging behind were individually visited by the master trainers to help them overcome professional challenges.

Table 6 shows progress on indicators from the Monitoring and Evaluation Activity Plan, based on the quarterly follow up surveys conducted over the life of the project using moving averages:

Table 7: Performance Indicators for Project Trained AITs

Indicators	Targets	Achievement (Combined Average)	Achievement (Weighted Average)
Average monthly income of AITs from providing AI services relative to the baseline	Income of at least PKR. 3,000 (US\$ 30) per month	PKR. 6,504	PKR. 6,804
Number of insemination procedures performed per AIT/ per month	-	24	24
Average number of inseminations per AIT per day	At least one insemination case per day	0.8	0.8
No. of pregnancy tests performed per AIT per month		25	32
Percentage of AITs providing AI services	60 percent of AITs	97 percent	97 percent

Ratio of insemination procedures to pregnancy	At most 1.7 insemination per pregnancy	1.48	1.53
Percentage of project-trained AITs introduced to input suppliers	100percent	100 percent	100 percent
Number of AITs successfully trained in book-keeping, business management	100percent	100 percent	100 percent

The most effective component of the Dairy Project is the training of AITs. This component has made the young non-working individuals to start up their own business and on average (moving average) earn PKR. 6,804 per month against the benchmark of PKR. 3,000 per month. The AITs are performing 24 AI procedures per month and playing their part in breed improvement of dairy animals. Moreover, the AITs regularly perform pregnancy tests. An average AIT performs 32 pregnancy tests per month. The ratio of artificial insemination to pregnancy on average is 1.5, however if this ratio is calculated on the insemination done by the project AIT himself then it drops to 1.3 compared to 1.7 for AI procedures done by non-project AITs. This shows that the project trained AITs are working more efficiently and professionally than their competition.



## Training and Support for Women Livestock Extension Workers (WLEWs):

Training of WLEWs is one of the most important components of the project as it not only aims to improve the potential of the livestock sector through better animal health and extension services at the village level, but also contributes in empowering rural women. The project in the reporting period did not train any WLEWs further as it had met the training target by last quarter. As of June 31, 2014 the Dairy project trained 5,015 WLEWs, which is above the set target of 5,000.

In order to spread awareness about the availability of project-trained WLEWs in their areas, 141 induction meetings were organized, which were attended by 5,904 participants. In order to ensure better linkages between the project-trained beneficiaries, 56 inter-beneficiary meetings were arranged to link WLEWs to AITs and trained farmers within their respective areas. Moreover, another 169 follow-up meetings were conducted to provide support to WLEWs. A total of 1,082 WLEWs benefited from these meetings. Also, 28 farmer-help camps were organized in which 1,259 farmers participated and had their animals treated and vaccinated by WLEWs free of charge.

The table below provides a comparison of WLEWs' performance on the indicators of the Monitoring and Evaluation Activity Plan.

Table 8: WLEW Performance Indicators

Indicators	Targets	Achieved (Combined Average)	Achieved (Weighted Average)
Average monthly income of WLEWs from livestock services relative to the baseline <sup>1</sup>	Income of at least PKR. 3,000 per month	PKR. 966	PKR. 1,144
Average number of farmers served by WLEWs per month	-	14	15
Number of villages served by the WLEWs <sup>2</sup>	2,000 villages	4,500	4,500
Number of project-trained WLEWs providing services as self-employed extension workers	At least 60percent of the trained WLEWs providing services	64 percent	64 percent
Number of WLEWs operating / managing project-supported milk collection points in project-assisted communities	At least 20 milk collection points	16	16
Number of WLEWs offering feed, nutrient, and other inputs for sale to farmers	60 percent	78 percent	78 percent
Percentage of project-trained WLEWs introduced to input suppliers	100 percent	100 percent	100 percent
Number of the WLEWs trained in business practices, book-keeping	5,000 WLEWs	5,015	5,015
1: Combined income of both Livestock Health Workers (LHWs) and Livestock Business Entrepreneurs (LBEs).			
2: Estimated Number of villages. According to the survey every WLEW visited 1.8 villages on average and we have trained 5,015 WLEWs. As per the project SOP of WLEWs' selection, we assume that at most 2 WLEWs are from one village.			

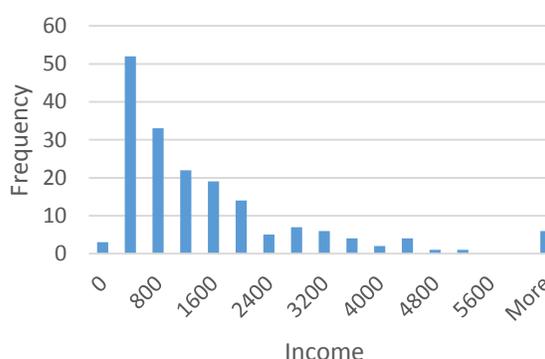
The project exceeded its expectations in coverage and training of the WLEWs and trained 5,015 women against a target of 5,000 women. Moreover, all of the trained WLEWs were introduced to suppliers and trained for book-keeping and other business practices. On average WLEW provided services to 15 farmers per month.

Moreover, the average monthly income of WLEWs continues to show an upward trend over the last year. The survey done in April 2014 shows an average monthly income of PKR. 1,524. In a male dominated field, WLEWs take time to make their mark as established and trusted service provider. Hence, the earning increases with experience. That is why the monthly average income over last 3 quarters is PKR. 966 per month, weighed down by earlier low earning months. This figure is still below Dairy Project's but there is an encouraging upward trend in the income. Perseverance of the WLEWs and tireless efforts by the field operations team belies this upward trend. The field operations team helped the WLEW business in the form of constant follow up, WLEWs cluster formation, improved supply channels and availability of rotating funds at cluster level.

Figure 3: Income trend of WLEW



Figure 4: Income histogram of sample (survey Apr, 2014)



It must be pointed out that WLEWs are operating in a patriarchal society and face an uphill battle against cultural barriers prevalent in rural Pakistan. Consequently, several of the project-trained WLEWs leave their business (the attrition rate is 34 percent). However, monthly income is not a gross measure of the impact of trainings that the project provides because there are indirect effects that are hard to quantify.

The impact of the training received by rural women is multidimensional and empowers them not only in financial terms but also socially and culturally. A detailed analysis was presented on this topic in the January – March, 2014 QPR. (Refer to Jan-Mar, 2014 QPR, Page 12). On the other hand, the profit margin for the WLEWs selling concentrated feed (*vanda*) is very low (11% as compared to 43% from medicines) as most of the farmers prefer traditional feeding methods and continue to feed 'Khal' to their animals. Hence, WLEWs have to sell feed on lower prices to attract the farmers.



## Communication, Awareness Campaign and Other Activities:

In addition to the USAID-DRDF Dairy Project's training and support services, there is a mass awareness campaign component to support the actual trainings and promote awareness among farmers on best dairy farming practices. The awareness raising campaign is extremely vital in supporting the Dairy Project's eventual goal as awareness of the benefits of implementing best farming practices is the key to improving livestock productivity at the farm level. Furthermore, the campaign also aims to highlight United States' assistance to Pakistan's dairy sector and subsequently, its economy.

A delegation of U.S. journalists visited to Dairy Project's artificial insemination (AI) training facility at Burj Attari, Sheikhpura on April 11, 2014. The objective of the visit was to assess the overall scale, scope, and impact of the U.S. assistance delivered through the trainings offered under the Dairy Project for Dairy Farmers, Artificial Insemination Technicians (AITs) and Women Livestock Extension Workers (WLEWs). During the visit, the delegation was given an overview of the project operations, interventions and accomplishments. Thereafter, the journalists made a thorough visit of the AI training center and observed different steps involved in AI practical training. The visitors also gained useful insights into the training program through one-to-one interaction with the beneficiaries.

The communications team planned to roll-out second round of street theatre shows on 12 significant dairy farming best practices in project's targeted areas including districts Multan Vehari, Muzaffargarh, Bahawalpur and Bahawalnagar. This two-week activity was designed to help raise awareness on best dairy farming practices and highlight USAID assistance for the dairy sector. Also, the campaign would be an effective effort to help establish credibility, sustainability and improved linkages of project's trained beneficiaries among the farming community, NGOs, district administration, livestock department and input suppliers. Furthermore, the best practices highlighted through the shows would serve as a refresher for the trained beneficiaries. After completion of procurement process, the Dairy Project's communications team started working with the selected firm and, meanwhile, several deliverables including concept, script, artwork for mobile float, handouts, steamers, banners, invitation cards, 3-D stage and set designs, and screening of identified areas were achieved. However, due to certain unforeseen security concerns, the Dairy Project had to roll-back this activity, till its next phase, conditional upon project's extension.

On May 15, 2014, Dairy Projects participated in a 30-minute live talk show "Aap HUM Aur Behtar Zindagi" on radio FM 101, leading radio "infotainment" network- channel in Pakistan. The purpose of this program was to highlight the assistance that the government of the United States is extending through USAID toward policy research and analysis that will lead to effective policy making in the areas of economics and agriculture. It was an interactive, live program, which highlighted key facts and achievements on USAID's Dairy Project. Sajjad Moghal, Senior Development Specialist, USAID Punjab, Mahrukh Rasheed, Manager Field Operations (Multan Zone), Dairy Project and three Dairy Project trained beneficiaries, hailing from Multan, Lodhran and Muzaffar Gargh were the key participants.

The communications team also worked on designing and printing of appreciation certificates for best performing Women livestock Extension Workers and Artificial Insemination Technicians. This was a welcome move to recognize their outstanding performance, strong commitment and great achievements as Dairy Project trained extension services providers. Also, appreciation certificates were developed for the Dairy Project's staff to acknowledge their valuable contribution for successfully realizing the project's goals.

Dairy Project's advertisements were drafted and released in newspapers, based on requirements. These included job opening by human resource department and expression of interests by the procurement department.

## Issues, Lessons Learnt and Way Forward

# Gaining From Experience

Table 9: Challenges, Learning and Mitigation

Component	Challenges	Solution/ Learning
Artificial Insemination Technician	It was quite a challenge to evaluate 350 AITs for the motorbike award with limited human resource.	To achieve target within specific time line, we developed 5 teams for performance survey in Punjab and one team for other provinces (KPK, Baluchistan, and Sindh). Smaller team size meant more flexibility and efficiency in team deployment.
	Due to security concerns and extreme weather conditions, it was difficult for DRDF teams to do Performance survey of AIT in Gilgit Baltistan (District: Sakardu).	To resolve the concern, we contacted to supporting organization (Satpara Development Project) to conduct an evaluation survey of trained AITs. Based on SDP evaluation 4 AITs qualified for Motorbikes.
	Due to security concerns, it was challenging for team to go to KPK to conduct performance survey and handing certificates to AITs.	We contacted supporting organization Sarhad Rural Support Program (SRSP) to assist our team through their regional offices in KPK where our teams conducted performance survey of AITs.
Women Livestock Extension worker	Late Induction of VMC (village milk collection) due to late approval of VMC kit by USAID office.	Teams inducted VMCs in Multan and Vehari after resolving kit concerns.
	Some certificates of WLEWs/AITs were misplaced and some beneficiaries couldn't receive certificates as they did not attend certificate distribution ceremonies.	Missing certificates were distributed after reprint on immediate basis and remaining certificates were handed over to beneficiaries on their door step who couldn't receive their certificates due to absence in certification ceremonies.

## Annexure

### **Annex 1: Project Overview**

The Dairy Project is a joint effort of the Dairy and Rural Development Foundation (DRDF) and the United States Agency for International Development (USAID) to foster sustainable increase in dairy and livestock productivity through adoption of best dairy farming practices, breed improvement, availability of timely extension services, and promotion of livestock businesses. The Dairy Project is being implemented in all four provinces, with a major focus on Punjab with a time frame of three years (July 2011- July 2014). The project contributes to the USAID strategic objective of creating job opportunities and increasing income. The project objectives are aligned with Pakistan's development agenda, and its goal and objectives reflect national and regional priorities.

### **Training and Support for Dairy Farmers**

The primary objective of providing training and support to dairy farmers is to improve prevalent dairy farming practices for improving livestock productivity and enhancing incomes of rural households assisted by the project. The project targets to train 9,000 farmers and 100 farm managers. In addition to this, 800 farmers from Khyber Pakhtunkhwa, Sindh and Baluchistan are supported in attending the project's training courses in Punjab. These trainings cover several topics including improved feeding and animal nutrition, importance of improved breeds, basic animal health, and farm equipment and shed management. Trainings for farm managers include separate components on basic bookkeeping and business skills. Knowledge of basic business know-how adds to the skills of farm managers. Consequently, all trained farmers have a better understanding of the milk value chain and how to profitably create linkages within it.

Classroom trainings are being conducted at model dairy farms, where modern dairy farm-management techniques are implemented. After successful completion of the training course, participants are provided with basic equipment kit that helps them to put into practice the newly learnt farming practices. Trained farmers are visited frequently for support and follow up.

### **Training and Support for Artificial Insemination Technicians (AITs)**

The objective of AI trainings is to improve the provision of AI services to foster good quality breeds that will improve livestock productivity and enhance income of rural youth. Under this component, 2,000 young individuals from rural Punjab, and 300 from Khyber Pakhtunkhwa, Sindh and Baluchistan will be supported in attending the project's AI training courses in Punjab. AITs receive five weeks of training with two months follow up support. Trainings include a mix of theory, demonstration and practical exercises related to insemination, safe handling and maintenance of insemination guns, liquid nitrogen cylinders for transporting semen and other equipment. Classroom trainings take place at AIT Centers, established by the Dairy Project, and the Government of Punjab's Vocational Training Institute (PVTI).

Each AIT receives initial support to establish him as an entrepreneur. This support includes AIT kit (including Nitrogen Cylinders, Semen, Semen Straws, and basic AI related equipment). A motorbike is also provided upon meeting certain performance criteria.

### **Training and Support for Women Livestock Extension Workers (WLEWs)**

The objective of this component is to increase the use and availability of livestock services provided by WLEWs for improving livestock productivity and enhancing income of rural females. Under this component, 5,000 WLEWs will be trained. WLEWs receive one-month training on basic animal health management, basic preventive animal health measure, identification of the most common diseases, immunization, basic treatment, animal nutrition and animal hygiene. The curriculum is updated in collaboration with University of Veterinary and Animal Sciences (UVAS). WLEWs are also trained in feed

supply and milk collection to give them the expertise to further grow their businesses. They also receive training in bookkeeping and business skills as well as linkages to service (including financial) and input suppliers along the dairy value chain.

Extension worker training are conducted in village clusters, so that women can attend training near their homes. A training camp is set up on a temporary basis at each site. The project arranges for transport to and from the site. All master trainers are women veterinary graduates. The program is certified by the University of Veterinary and Animal Sciences (UVAS).

Upon completion of the course, WLEWs selected for animal nursing are given a veterinary kit, while WLEWs doing concentrates businesses are supported by a stock of animal feed. The program also provides workers with basic mobile phones to enable easy communication with clients and input suppliers.

## **Awareness Campaign**

The overall objective of the Dairy Project's mass awareness campaign is to increase awareness about the best dairy farming practices for improving livestock productivity in Pakistan. Under this component, TV, radio, and/or print infomercials on subjects such as de-worming, vaccination, mastitis control, breeding, and feeding practices are being developed. The awareness campaign through TV, radio, and/or print media is to be aired in about 2,000 villages in Punjab and other provinces. Farmer days and silage-making days are organized to motivate farmers to adopt improved animal husbandry practices.

## **Annex 2: Environmental Compliance Report**

In order to fulfill requirements of Environmental Monitoring Program Plan (EMMP), guidelines were developed for safe disposal of waste generated. Additional guidelines include health and safety measures to avoid any harm or injury to the trainees.

A component-wise description of environmental compliance is given below.

### **Component 1: Farmer Training**

Farmer training component is covering best farm management practices. Bio-security measures are adopted at the entrance of the farm to avoid any disease from the outside environment. Feet are disinfected at the entry of the farm to prevent contagious viral/bacterial diseases.

Teat dipping and parlor milking process is described to the farmers so that they could avoid the diseases occurring in animals after the milking.

Storage of the animal feed is very crucial because proper storage can minimize the chances of moisture in the feed from the ground surface and side walls. Moisture is one of the main causes of moldiness and mycotoxins in animals feed so racking is recommended to the farmers to avoid these hazards to the farmers.

Farmers are briefed on environmental considerations and safe handling of the equipment during silage making. Farmers are also briefed about the crop quality check and unwanted fermentation avoidance procedures.

### **Component 2: Artificial Insemination Technician Training**

Dairy project had already completed its targets. So, no monitoring visits of training centers were carried out in current reporting period.

However, previously, AITs were taught about best AI practice like proper heat spotting & semen handling. Safe handling of liquid nitrogen had been communicated to the beneficiaries. They were taught about the

significance of personal protective equipment (safety goggles & cryogenic gloves). All AI trainees wear *dangri* (overalls), gum boots and gloves during practical training on live animals to minimize the chances of disease transfer to human beings. During table practice, gloves, face masks and aprons were worn by the trainees' invariably. Organs and contaminated gloves have been disposed of in limed pit.

### Component 3: Women Livestock Extension Worker (WLEW) Training

Since, Dairy Project has already achieved its targets so no further activity has been carried out. Previously, best basic livestock extension practices were taught to the WLEWs and health safety measures like handling of medicines and syringes had been incorporated in training content. Medicines were protected from the sunlight during outdoor sessions by use of kit bag thereby complying with the product specifications. Moreover, expiry date is checked before usage of medicines. Syringes and empty medicines bottles were also disposed of in acceptable manner.

### Conclusion

Dairy project has been able to comply in most of its activities with environmental compliance procedures. However, there occurred some instances of non-compliance in the beginning like used syringes usage issue was observed and discussed with the top management, which was ultimately resolved by increasing the quantity of the syringes in master trainer kit. On the whole, Dairy Project had a positive impact on community with minimal environmental cost.

## Annex 3: Key Events Held During the Reporting Period

Table 10: List of Key Events Held During the Reporting Period

Sr. No	Date	Event	Location	Remarks
1.	April 11, 2014	U.S. journalists visited to Dairy Project's artificial insemination (AI) training facility	Burj Attari, Sheikhpura	The objective of the visit was to assess the overall scale, scope, and impact of the U.S. assistance delivered through the trainings offered under the Dairy Project for Dairy Farmers, Artificial Insemination Technicians (AITs) and Women Livestock Extension Workers (WLEWs).
2.	May 15, 2014	Dairy Project Live on FM 101	Pakistan Broadcasting Corporation, Islamabad	Dairy Project participated in a 30-minute live talk show "Aap HUM Aur Behtar Zindagi" on radio FM 101, leading radio "infotainment" network- channel in Pakistan. The purpose of this program was to highlight the assistance that the USG is extending through USAID toward policy research and analysis that will lead to effective policy making in the areas of economics and agriculture.
3.	April 23, 2014	Motor Bike Distribution for AITs from other provinces	Joy Land Hotel, Vehari	AITs and Project team attended the event.

4.	April 29, 2014	Graduation Ceremony of 20th batch of WLEWs	Millan Marriage Hall, Hasil Pur	Representatives from government administration, NGOs, livestock department, dairy and pharmaceutical companies and rural community participated in this ceremony.
5.	May 17, 2014	Motor Bike Distribution for AITs from other provinces	Raheem Yar Khan	AITs and project team attended the event.
7.	May 28, 2014	Motor Bike Distribution for AITs from other provinces	Abbot Abad	AITs and project team attended the event.
8.	June 11, 2014	Motor Bike Distribution for AITs from other provinces	Jhang (Rajhana)	AITs and project team attended the event.

#### Annex 4: Performance Evaluation Sampling Strategy

For the last QPR (April-June 2014) there was no dedicated evaluation conducted for the impact and progress of the project. The reported performance statistics are computed as combined averages of previous quarterly statistics. To get a better evaluation simple Combined Averages and Weighted Averages (Weighted Moving Averages) are computed. Moving averages tend to factor out any seasonality effects which tends to add up in the total impact of the project and weighted averages are also computed to give more weight to the recent quarter figures. Time period taken to carry out these averages is of 4-quarters, stats from the last four QPRs were averaged to get a fair average impact of the project. The formula used to calculate Weighted Average is given below.

$$\text{Weighted Average} = \frac{nx_m + (n-1)x_{m-1} + \dots + 2x_{m-n+2} + x_{m-n+1}}{n + (n-1) + (n-2) + \dots + 2 + 1}$$

Where  $x_m$  is the value in  $n$ th quarter, while  $x_{m-n+1}$  is the value in first quarter.

The methodologies used for evaluation surveys in the past are as follow.

#### Survey Methodology:

The primary objective of the evaluation activity is to get a reliable indicator of the project's performance in three components vis-à-vis farmer, AIT and WLEW training. Given logistical and security constraints, it is not possible to cover all districts from where the Dairy Project has trained beneficiaries. Therefore, for sampling purposes, the beneficiaries trained in Punjab are picked as approximately 85 percent of the project trained farmers and AITs and 100% of the WLEWs are from Punjab.

For sampling purposes proper statistical methods are adopted to determine the sample size for the survey. Confidence level of 90percent and significance level of 5percent is kept to gain more accurate insights to the impact of the project. The evaluation sampling is handicapped by the unavailability of baseline data, especially for the farmer component. Hence, an evaluation design is adopted that allows us to get both baseline and end line values simultaneously.

Survey tools are designed in accordance with the projects key outcome indicators illustrated in Monitoring and Evaluation (M&E) Activity Plan. Keeping in view the experiences from the past quarterly surveys, survey tools are refined and necessary questionnaire added to gather more insights into the impact of trainings provided by Dairy Project. Enumerators' training is an essential part of quality data fetching. A

complete training session is organized in Multan for all the enumerators conducting the survey. Enumerators are introduced to the probing methods and all research instruments are briefed one by one. After complete orientation on probing techniques and survey instruments, mock sessions are held which are observed by trainers. Later trainers provide their feedback on mock sessions one by one to each participant for improvement.

After the questionnaires are finalized and well briefed to enumerators, a pilot is carried out in Multan zone. This not only refines the tool even further, but also helps the enumerators to get first-hand experience. Two such pilots are carried out before final implementation. After successful pilot testing and planning, the survey is carried out by four main working zones of the project which are namely Multan, Vehari, Kamalia and Hasilpur.

To ensure the quality of data, M & E has a complete monitoring plan which is implemented with the help of M & E zonal staff. M & E officers make random checks on the interview sessions carried out by the enumerators to ensure accuracy of the data collected. Complete data flow procedures are documented with all the data quality and verification checks explicitly mentioned. After receiving the questionnaires from the enumerators and before it is entered in to the database, the data is verified by Monitoring and Evaluation Officer and Assistant Zonal Manager at two different stages to ensure the quality of data. Even though the data is received after rigorous checking, the analyst further cleans it and checks for errors and outliers to have a refined data set for analysis.



## SUCCESS STORY

### Recording Accomplishments

#### Dairy Project trains farm manager to improve livestock productivity



Photo by USAID-DRDF Dairy Project

Ramadan maintaining record of his ear-tagged animals.

“The biggest difference that the training made to increase my profitability was to reduce the cost of labor on my farm. Secondly, the productivity of my animals increased and now each animal on average produces two liters more than it used to.”

Muhammad Ramadan

Dairy Project trained farmer from Multan

Muhammad Ramadan is an ambitious and progressive dairy farmer who hails from the village of Basti Goharwala, Multan. He is the father of four children and owns 12 acres of land. Living in a small village he heard about the Dairy Project’s Farm Manager training from his neighbor, who is also a project-trained beneficiary. Keen to learn the best practices that his neighbor had learnt, Ramadan signed up for the Farm Managers training when the Dairy Project’s Social Mobilization team visited his village.

“I wanted to get trained because although dairy farming is our age old profession, we have not seen any progression or development in this field” says Ramadan. “I wanted to learn how to adopt modern practices and improve the productivity of 35 animals that were in my shed.” While his family has always been involved in dairy farming, Ramadan did not have a clear idea of the profitability of his animals as he maintained no records. The month long farm managers’ training teaches concepts such as animal handling, feeding, nutrition, recordkeeping, shed management and breed improvement.

After completing the training, Ramadan constructed new feeding passages which were 14 feet wide and fenced his dairy shed so that animals could move around freely and consume water as they desired. He also started record keeping and learnt that these practices resulted in an increase of two liters of milk per animal per day. Confident by his progress, Ramadan bought 15 more animals of the best dairy breed. His average monthly profit is now Rs 70,000 and his average milk yield per day is 150 liters.

“The biggest difference that the training made to increase my profitability was to reduce the cost of labor on my farm. Secondly, the productivity of my animals increased and now each animal on average produces two liters more than it used to” says Ramadan. In the future he wishes to further upgrade his farm by constructing a modern dairy shed. “Thanks to the Dairy Project, I have extra income which will enable me to send my children to the best schools in Multan” remarks a happy Muhammad Ramadan.



## SUCCESS STORY

### Breaking Free From Poverty

#### Dairy Projects artificial insemination technicians training lifts youth out of poverty

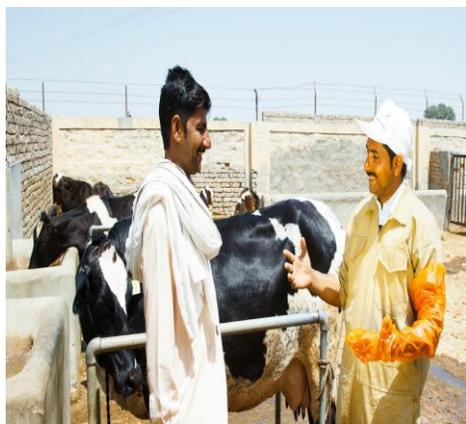


Photo by USAID-DRDF Dairy Project

Hakim Ali explains the insemination process to a client

*“Thanks to the Dairy Project training I have improved my income and additionally I have gained respect in my community for my services.”*

Hakim Ali Watoo, Artificial Insemination Technician from Kot Sadaat, District Vehari.

Hakim Ali Watoo is a resident of Kot Saadat, Teshil and District Vehari. He is 31 years old and after passing his matriculation exams he had to drop out of higher education as his parents needed him to earn a living for the family. However, Hakim was unable to find a good job and consequently decided to become a street hawker who sold fruit to his community. He earned a profit of Rs 1,500 a month through this business which was insufficient for him to feed four dependents. Desperate to improve his family’s economic status, Hakim Ali constantly looked for other opportunities that could increase his income.

The Dairy Project’s social mobilization team visited his village and informed the religious leader of the community about the trainings who made announcements in the mosque to create awareness of the Projects training. Hakim immediately signed up for the AIT training and after taking a written test he got selected as a trainee. The training taught him practical skills such as heat detection, process of insemination and customer management.

Hakim finished the month long training in February 2013 and has been practicing as an artificial insemination technician since then. He earns an average monthly profit of Rs 30,000 which has enabled him to construct a new house for his family comprising of one room and a bathroom. “My family has seen very tough times as we did not even have permanent shelter and lived under a thatched roof of a mud house. Ever since I took the USAID-DRDF training our fortunes have changed. Now we have sufficient food and shelter.”

In the future Hakim plans to expand the geographical area of his work and reach out to a greater number of farmers. His dream is to send his parents for Hajj.



## SUCCESS STORY

### Women Empowerment in Rural Punjab

**USAID-DRDF Dairy Project trains Woman Livestock Extension Worker to provide basic animal health care in her village**



Photo by USAID-DRDF Dairy Project

Farhat at her clinic and selling medicine to a client

*“By receiving this training, I am now in a position to protect my community’s livestock. I never thought that this kind of an opportunity will be given to women in our small village.”*

Farhat Latif, Dairy Project trained WLEW from district Sahiwal.

Project trained Woman Livestock Extension Worker, Farhat Latif, provides medicine and basic health care to dairy animals based in village 34/14/L, located in tehsil Chichawatni of district Sahiwal

After completing her undergraduate studies, Farhat wanted to study further; however, her family did not have sufficient resources to fund her education. Her only brother had been unemployed for five years and her father was often bed ridden due to old age. While she wanted to support and provide for her family, there were no opportunities in her village which she could undertake to ensure a steady income. Henceforth, when she heard about the Dairy Projects training, she immediately decided to participate in the training

Farhat took the Dairy Project’s WLEW training in September 2012 and learnt about animal management, vaccination, deworming, mastitis control and other such hands on skills required to address basic animal health care concerns. Farhat is now earning an average monthly profit of Rs 7,000 through which she funds her Master’s degree in Physical Education and has recently also bought a computer to further her learning.

“I have always liked dairy animals. By receiving this training, I am now in a position to protect my community’s livestock. I never thought that this kind of an opportunity will be given to women in our small village. Many women in my community desire to get the WLEW training as it is a great business opportunity,” remarks Farhat.

The training has not only helped Farhat and her family, but has been beneficial for other dairy farming households in her village. Her neighbor, Rehmat bibi who owns 13 animals highlighted that she was very comfortable working with another female “I have called Farhat several times even if it’s late at night to treat my animals. Having a WLEW in the neighborhood has been a source of great convenience since Vanda (high quality fodder) is available at my doorstep and animals can be treated on an emergency basis.