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Foundation



# DAIRY PROJECT

## ANNUAL PROGRESS REPORT

### JULY 2011 – JULY 2012

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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>DRDF</b>	Dairy and Rural Development Foundation
<b>FM</b>	Field Manager
<b>GM</b>	General Manager
<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>PMP</b>	Performance Monitoring Plan
<b>PMU</b>	Project Management Unit
<b>RFP</b>	Request for Proposal
<b>LHW</b>	Livestock Health Worker
<b>LBEs</b>	Livestock Business Entrepreneurs
<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
<b>ZM</b>	Zonal Manager

## **EXECUTIVE SUMMARY AND PROGRAM HIGHLIGHTS**

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

The Dairy Project contributes to the USAID strategic objective of creating job opportunities and increasing incomes. The activity of the dairy project is aligned with Pakistan's development agenda, and its goal and objectives reflect national and regional priorities. This annual progress report describes the operations and progress in the first year that is July 2011 to July 2012, of the project implementation.

During Year one, the Dairy Project team worked in three general directions as spelt out in the program components: to improve prevalent dairy farming practices for improving livestock productivity and enhancing incomes of rural households; to improve the provision of Artificial Insemination (AI) services to foster AI of good quality breeds for improving livestock productivity and enhancing incomes of AITs; and to increase the use and availability of livestock services provided by WLEWs for improving livestock productivity and enhancing incomes. The dairy project is training rural dairy farmers to adopt modern dairy farming practices and promoting animal health management and breed improvement services to witness manifold increases in milk yields and livestock productivity, which creates a snowball effect by improving their standard of living as well.

Implementation of the project was delayed and started in August 2011 due to security issues in Punjab. Nevertheless, the project commenced its activities with the establishment of a Project Monitoring Unit (PMU) in Lahore. In the second stage, two Field Offices in Peer Mahal and Chichawatni were established. In January 2012, project activities expanded to Multan with the establishment of a zonal office in that region. In the same month, trainings under all of the three training components of the Dairy Project were initiated on the full scale.

Besides trainings, a mass awareness campaign component to promote awareness amongst farmers on the best dairy farming practices is also being initiated on different levels. As part of

the accreditation of training courses from recognized academic institutions, ARID Agriculture University Rawalpindi and the University of Veterinary and Animal Sciences (UVAS) Lahore, are supporting project implementation by providing examination and certification services for the project's AIT and WLEW training courses.

*Key project highlights and results include:*

### **Component 1: Training and Support for Dairy Farmers**

Under component one, the Dairy Project team worked with both public and private sector institutions to help the project team achieve its goals as identified in the annual implementation plan. As of July 2012, the project trained a total of 3591 farmers from Pir Mahal, Chichawatni, and Multan zones. The trained farmers were encouraged to adopt progressive farming practices which lead to an increase in milk yields. The results show that 55 percent of the trained farmers are practicing and applying at least three of the newly learnt farming practices. A subsample of those farmers, who have adopted best practices of deworming, Vanda feeding, and free access of water shows that these farmers have experienced a 19 percent increase in milk yields per animal, which has led to an overall increase of 21 percent in their annual incomes, thus improving their standard of living.

### **Component 2: Training and Support for Artificial Insemination Technicians (AITs)**

The dairy project is creating employment opportunities for the rural unemployed youth by equipping them with a new skill that is, training them as AITs. In the reporting period, the project has successfully trained 439 AITs. The results show that the average per month number of AIs is around 20, while the average per month figure for pregnancy tests is 17. This has resulted in a monthly income of PKR 4,000/- for the project-assisted AITs. The dairy project has reduced the employment gap by providing them with a source of livelihood. Through these trainings, they have become self-employed and more productive, and are able to make a living for themselves and their families.

### **Component 3: Training and Support for Women Livestock Extension Workers (WLEWs)**

The dairy project aims to train 1160 WLEWs in its intervention areas. Dairy Project's internal data shows that almost 94 percent of WLEWs are active and are attending to 32 cases per month on average. The Dairy Project has created a job opportunity for this marginalized segment of the society. Through project trainings, WLEWs are able to earn PKR 2500/- per month. The incomes of WLEWs and other results of WLEWs are discussed in detail in the forthcoming portions of this report.

Besides providing trainings, the Dairy Project provides its beneficiaries with support kits in order to establish them as self-employed entrepreneurs and kick-start businesses of AITs and WLEWs. Dairy Project's post-training support includes regular follow-up activities for provision of technical help on the ground by identifying and resolving the issues faced by the beneficiaries in the project areas. Dairy Project's internally collected initial data shows that the trainings are stimulating increases in income levels of Dairy Project's beneficiaries, improving the female participation in the labor force and reducing the levels of unemployment in the rural areas by creating job opportunities for the rural youth.

This annual results report covers the accomplishments and progress of the Dairy Project achieved during first year of the project that is, July 15, 2011 to July 30, 2012. Moreover, the report highlights achievements towards the intended results, major challenges faced in implementation, lessons learnt and the way forward. A few case studies from the field have also been added to highlight the project's success in achieving the envisioned results.

While the project has made significant achievements since its launch, there have been challenges in terms of meeting the targets due to late recruitment of field staff, late approval of restricted items, and the unavailability of slaughterhouses. As the project has developed the required infrastructure, acquired the necessary institutional capacities, and obtained necessary approvals as regards to medicines and Vanda, considerable progress is expected in the upcoming year. As a result of this progress, it is expected that USAID-DRDF Dairy Project will achieve the desired results in an even efficient manner.

## **CHAPTER 1: BACKGROUND AND INTRODUCTION**

### **1.1 Background**

The dairy and livestock sector contributes to the Gross Domestic Product (GDP) of Pakistan by around 11 percent. There are 7 million families involved in traditional farming practices and a total of 67 million cattle and buffaloes in this country. More than half of the dairy farmers live in the Punjab province.

Most of the dairy farmers have only two to three dairy animals and are not following progressive dairy farming practices due to which milk and meat supply is growing by less than two percent per annum. Moreover, the farmers have very limited access to veterinary and breed improvement services, which if available, can improve dairy animals' milk yield and eventually livelihoods and incomes of rural communities. As a result, milk and meat supply is growing by less than two percent a year, while demand for these products is increasing by five percent a year.

In order to address these challenges, the United States Agency for International Development (USAID) and Dairy and Rural Development Foundation (DRDF) have launched the Dairy Project. DRDF is a charitable, non-profit, non-political and non-government organization (NGO), that was established in 1996 by interested cattle breeders, extension workers, and the milk industry. DRDF has worked extensively with dairy producers across Punjab on various activities including breeding, feeding, management and health improvement. The project was initiated to foster sustainable increases in dairy and livestock productivity through adoption of best dairy farming practices, breed improvement, availability of timely extension services, and promotion of livestock businesses. Due to the vital importance of livestock sector in the rural economy of Pakistan, the Dairy Project's extensive training programs for dairy farmers, women livestock extension workers, and artificial insemination technicians will play an important role in transforming livelihoods of rural communities.

The Dairy Project's mission comprises of the following key objectives:

- a) to train and build the capacities of a sizeable number of small holder dairy farmers in best farming practices focusing on fodder and animal nutrition;
- b) breed improvement through promotion of artificial insemination;
- c) develop village level para-veterinary services through training of women as extension workers; and

- d) promotion of entrepreneurship through training and building linkages with input suppliers.

In line with the above objectives, Dairy Project has formulated trainings for young men and women and small-scale farmers in rural Punjab. The project aims to target those involved with the dairy sector and are in need of a solid platform to increase their employment opportunities and incomes with their newly acquired skills and services.

The project is expected to result in improved farm management, higher milk productivity, reduced disease incidence, and adoption of better breed animals. The project aims at increasing incomes of rural households and creating more jobs in the rural economy.

**“The USAID-DRDF Dairy Project will be spearheading the improvement of breeds in Pakistan. I must take this occasion to thank USAID in supporting us in this endeavor which touches the lives of people at the grass root level.”**

Dr Salman Shah, Chairman DRDF

## **1.2 Project Overview**

The project, which comprises of a training activity at its core, has the following targets:

- Train 9,000 dairy farmers and 100 farm managers on best dairy farm management techniques particularly focusing on the awareness of best farm practices. Out of these, at least 800 farmers will be trained from Khyber Pakhtunkhwa, Balochistan and Sindh.
- Train 2,000 unemployed rural youth and establish them as self-employed entrepreneurs providing artificial insemination services. Out of these, at least 300 AITs will be trained from Khyber Pakhtunkhwa, Balochistan and Sindh.
- Train 5,000 rural educated women as women livestock extension workers and establish them as self-employed entrepreneurs.
- Implement a mass awareness campaign that will increase knowledge of best dairy farming practices.

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

The dairy farmer training component of the Dairy Project aims at delivering awareness trainings for rural dairy farmers on best dairy farming practices. The Dairy Project strives to increase awareness so that a demand for extension services of WLEW and AIT is created as well; this will result in better breeds and increased milk production within the dairy sector. As a result of the farmer training initiative, farmers should experience a shift in their farming practices and

simultaneously illustrate the change through higher milk yield and an improvement in their incomes and livelihoods. These trainings the Dairy Project will achieve its primary goal of creating incomes and opportunities for rural Pakistanis associated with the dairy sector, resulting in economic growth for the country. The goal of the project is to conduct training sessions for 9000 farmers and 100 farm managers. In addition to this, 800 farmers from Khyber Pakhtunkhwa, Sindh and Balochistan are supported in attending the training courses the program is offering in the Punjab region. These trainings cover topics such as improved feeding and animal nutrition, basic level animal health management, farm equipment management, shed management, and the importance of improved breeds. All trainings for farm managers include separate components on basic bookkeeping and business skills. Knowledge of the basic business know-how adds to the skills of farm managers and an introduction for small scale farmers. In this way, all trained farmers will 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 including the Nestlé demonstration farms at Sarsabz and Sukheki. All farmers participating are supposed to receive follow-up for a specific duration depending upon the type of intervention. 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. In order to provide additional support to the farmers, Dairy Project purchased silage making machines in January 2012 to use them for demonstration and awareness raising at the project's activity areas.

### **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 help in improving livestock productivity and enhancing incomes of rural youths assisted by the project. The Dairy Project's AI trainings will significantly empower unemployed youths as entrepreneurs offering breeding services to dairy farmers, who are in turn acquiring access to better quality semen supplies ensuring better breeding of animals. The overall aim is to ensure that through better breeding, farmers are able to increase their milk production and incomes. As a result, income opportunities for both farmers and AI technicians are being created.

Under this component, 2000 young individuals from rural Punjab, and 300 AI workers from Khyber Pakhtunkhwa, Sindh and Balochistan will be supported in attending the training courses

that the program is offering in the Punjab region. These AITs are given five weeks of training with additional support provided during two months of follow-up for each batch of AITs by the project team. Trainings include a mix of theory, demonstration and practical exercises related to insemination and the safe handling and maintenance of insemination guns, liquid nitrogen cylinders for transporting semen, and other AI supplies and equipment. Classroom trainings take place at AITs Centers (established by the Dairy Project) and the Government of Punjab's Vocational Training Institutes (PVTC).

Each AIT is being provided with initial support including nitrogen cylinders to establish him as an entrepreneur. This support will include AIT kit (including Nitrogen Cylinders, Semen, Semen Straws, and basic AI related equipment) and a motorbike if he meets the basic performance criteria.

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

In Pakistan, more than 80 percent of rural women are involved in livestock management primarily in the field of feeding, watering, milking and medication. The females involved in livestock farming are poorly educated or illiterate, but they have the potential to learn and establish themselves as entrepreneurs and generate incomes through such training projects. Due to lack of guidance, training, and access to markets and, poor resources they are unable to learn and adopt such income-generating activities on their own. Through its training program for Women Livestock Extension Workers (WLEWs), the Dairy Project is filling the void in Pakistan's dairy sector in this sector.

In order to provide economic relief to a major chunk of the population comprising of women, dairy project is determined to train 5000 WLEWs by offering six-week long training course. The curriculum for this training is updated in collaboration with the accredited veterinary institutes such as University of Veterinary and Animal Sciences (UVAS). The trainings include basic animal health management, basic preventive animal health measure, identification of the most common diseases, immunization and basic treatment, animal nutrition and hygiene, and water management. Extension worker trainings are conducted in village clusters, so that women can attend training near their homes. A training camp is also set up on a temporary basis at each site. The program arranges for transport to and from the site as well. The master trainers are usually women veterinary graduates.

The extension workers are also trained in feed supply and milk collection to give them the expertise to further grow their businesses. As with trainees in other components of the program, WLEWs are also being given bookkeeping and business training as well as linkages to service (including financial) and input suppliers along the dairy value chain.

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

Also, the project has experienced an increase in the use and availability of livestock extension services provided by WLEWs for improving livestock productivity and enhancing incomes of rural females assisted by the project. The trainings focus on livestock management, which is being passed on in the form of increased use and availability of livestock services provided by WLEWs. An indicator of success in this area is that farmers' access to services of self-employed WLEWs has increased in project focused areas. Not only is this providing project trained WLEWs with income boosts and better lifestyles, it is also giving farmers increased access to extension services, which were otherwise not readily available. Consequently, this ensures increased milk production and incomes in the dairy sector.

### **Awareness Campaign**

The outreach activity aims to develop TV, radio, and/or print infomercials on subjects such as de-worming, vaccination, mastitis control, breeding, and feeding practices. The awareness campaign through TV, radio, and/or print media is aired in about 2000 villages in the Punjab and other provinces. During Year One, farmer workshops, farmer days and silage-making days were also organized to motivate farmers in Punjab, Sindh and Khyber Pakhtunkhwa to encourage them to adopt improved animal husbandry practices.

### **1.3 Dairy Project's Geographic Focus**

The project area selection methodology is primarily based on a strategy that aims at an appropriate balance between efficiency and equity concerns. A ranking of 35 districts<sup>1</sup> of Punjab has been made based on indicators relevant to the project. Based on this ranking and other administrative considerations (particularly in terms of follow-up) and security situation (particularly for WLEW training), Dairy Project has selected the districts to be targeted in

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<sup>1</sup> Due to unavailability of segregated data, data of district Jhang includes district Chiniot as well.



## **1.4 Key Partnerships**

In order to effectively implement the project trainings, the Dairy Project has collaborated with various private sector organizations and institutions. Some key partnerships developed in the reported period are as follows:

### **1. University Of Veterinary & Animal Sciences, Lahore (UVAS)**

The University of Veterinary and Animal Sciences, Lahore, is one of the oldest Veterinary Institutions in Asia. Since its inception in 1882, the staff of this Institution has worked enthusiastically and successfully to conduct a wide range of programs that have effectively catered the educational and training needs in the field of Veterinary and Animal Sciences.

In order to achieve the training milestones of the Dairy Project, the Vice Chancellor of UVAS Lahore and the Chief Executive, Dairy and Rural Development Foundation (DRDF) Lahore, mutually signed a Memorandum of Understanding (MOU), wishing to develop goodwill and to expand interaction for hands-on trainings and certification of master trainers to ensure that certified trainers are entitled to conduct further trainings for Women Livestock Extension Workers (WLEWs), Farm Managers and Artificial Insemination Technicians (AITs) in the field/rural areas of Pakistan; curriculum development, exams and certifications to trainees (AITs, Farm Managers and WLEWs) and to provide support in the areas, where technical professional assistance will be required in the Project.

### **2. Punjab Vocational Training Council (PVTC)**

PVTC is an autonomous corporate body established by the Punjab Government. Its mission is to promote private sector participation by imparting demand-driven skills training and enhancing employability for disadvantaged youth.

The Dairy Project signed a Memorandum of Understanding (MOU) with PVTC to collaborate for conducting trainings for Artificial Insemination Technicians at Vocational Training Institute in Burj Attari, district Sheikhpura.

### **3. Arid Agricultural University, Rawalpindi**

USAID-DRDF Dairy Project signed a Memorandum of Understanding (MOU) with PMAS-ARID Agriculture University. The MOU was developed with the objective of expanding hands on trainings and certifications of Dairy Project's AI trainees. The MOU between the two

organizations entails assisting and providing practical training to the AI trainees in Rawalpindi slaughter house and certifying the successful AITs.

#### 4. Nestle

Nestle Pakistan is providing technical support to the Dairy Project. Nestle Pakistan has also dedicated two farmer training centers including Sukheki and Nestle Sarsabz dairy farms to the Dairy Project farmer and farm managers' trainings, with both local and imported cows. Nestle Pakistan also provides resource management support to the Dairy Project, and nine Nestle employees are currently employed in the project including Project Director, General Field Manager Operations, Financial Controller, Human Resources Manager and two Field Operation Managers. Nestle Pakistan also provides overall guidance including linkages with government officials. As per the agreement, Nestle Pakistan provides antibiotic medicines for the WLEW kits and nitrogen gas for the AI technician kits. Contribution also includes support from personnel and zonal management staff for milk collection in the Punjab region, including selection of trainees and induction of project-trained beneficiaries.

### 1.5 Financial Summary

**Table 1: Developmental Task Budget and Variances**

Developmental Tasks		As of End of This Report Period			
		Budgeted Expenditure	Actual Expenditure	Variance \$	Variance %
1	LLW	694,431	222,788	471,643	68%
2	AIT	760,078	469,933	290,145	38%
3	Farmers	298,980	233,189	65,791	22%
4	Others	2,144,451	2,051,464	92,987	4%
5	Communication	462,094	249,615	212,480	46%
<b>TOTALS</b>		<b>4,360,035</b>	<b>3,226,989</b>	<b>1,133,046</b>	<b>68%</b>

The variance, above, is attributed to the delay in planned procurement of certain high value items due to the pending approval sought from Office of Acquisition and Assistance. Such items

include medicine for LHWs and Vanda for LBEs. Furthermore, purchase of motor bikes for AITs was also delayed as Sales Tax Exemption was in process by Ministry of Finance, Government of Pakistan.

Speaking of utilization of funds in second and third year of the project, the level of spending will rise substantially as the approvals of above stated items were granted during the quarter ended December, 2012. Moreover, Sales Tax Exemption has also been granted by Ministry of Finance. Consequently, the variance will be compensated during the remaining life of the project (see Annex 1 for projected expenditures during the next two years of the project).

## **CHAPTER 2: PROJECT'S PROGRESS AND PERFORMANCE**

### **2.1 Institutional Development/ Establishment of PMU**

USAID funding for the Dairy Project was approved on Jan 28, 2011; however, due to deteriorating security situation in the Punjab region implementation of the project had to be delayed until August 2011. Soon after the launch of the project, key staff of the Project Management Unit (PMU) including Project Director, General Manager Operations, and Financial Controller was immediately hired while the remaining staff was recruited in October 2011.

PMU is headed by the Project Director (PD) acting as a control body for the entire project as well as to provide leadership support to the field offices in order to ensure efficient delivery of project results as per the contractual agreement.

Field offices have been established at three locations namely, Chichawatni, Peer Mahal (Toba Tek Singh) and Multan regions<sup>2</sup> besides setting up training activity centers at five other locations in the project area. The field offices are responsible for selection of trainees, social mobilization of farmers, training delivery, follow up, and monitoring and reporting of all project activities in the field.

After rolling out the first batch of AITs in November 2011, DRDF implemented the recommendations of the risk mitigation framework to bring its financial, procurement and human resource management in line with USAID standards bringing its assessed risk to a minimal level.

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<sup>2</sup> Chichawatni and Pir Mahal zonal offices have already been established. Another zonal office is being established in Multan.

## **2.2 Role of Committees**

### **Steering Committee**

The USAID-DRDF Dairy Project Steering Committee is composed of the USAID AOR Senior Development Advisor Mr. Sajjad Mughal, Head of Milk Collection Nestle Pakistan, Mr. Bill Stevenson, Chairman Steering Committee Mr. Yawar Ali and Head of Corporate Affairs Nestle Pakistan, Mr. Sheikh Waqar. The Steering Committee's role encompasses spearheading the operational activities of the Dairy Project and acting as a monitoring body for the project. The Steering Committee provides frequent support to the project, including monthly meetings and reviews.

### **Audit Committee**

The Audit Committee comprises of three members of the Board of Governors and meets on a quarterly basis. The Internal Audit team reports to the Committee on a quarterly basis for project's functional matters.

### **Procurement Committee**

The Procurement Committee comprises of two categories: PRC 1 and PRC 2. Procurement Committee 1 comprises of a team of members including Project Director, Chairman DRDF, General Manager Field Operations, Financial Controller and Procurement Officer. Procurement Committee 2 consists of Project Director, General Manager Field Operations, Financial Controller and Procurement Officer. Purchases valued between 100,000 and 4,30,000 are directed to PRC 2 and all those above the mentioned amount are handled by PRC 1 for approvals. The Procurement Committee works closely with the DRDF Semen Selection Committee regarding procurement of semen supply for the project-trained AITs. The DRDF Semen Selection Committee comprises of members of the Steering Committee, Board of Governors, Project Director and livestock experts from the Livestock Secretariat and Dairy Development Department. The primary objective of the DRDF Semen Selection Committee is to select top quality bull semen on behalf of DRDF. In case of local breeds, the Committee selects bulls from Qadirabad Semen Production Unit (SPU), including the 'Nili Ravi' and 'Sahiwal breed'. This Committee also helps in selection of the most suitable sires from the international breed.

### 2.3 Field/Zonal Office for Trainings

The project selected two places for the WLEW trainings. The first zonal office is located at Chichawatni (District Sahiwal), while the other one is based at Pir Mahal (District Toba Tek Singh). Each zonal office has residential

facilities separately arranged for male and female team members. The zonal offices have four training and social mobilization teams.

Each team is comprised of a Master Trainer (Female), Social Mobilizer (Female), Social Mobilizer (Male), and driver. In addition to this, two follow-up teams are also based in the zonal

offices with the following members: Follow-up Training Assistant (Male), Follow-up Training Assistant (Female), and driver



These trainings courses are conducted at eight different training centers in Pir Mahal and Chichawatni zones.

### 2.4 Selection Process and Social Mobilization Strategy

Given local sensitivities, the project has adopted a carefully crafted selection process using social mobilization approach that underpins the importance of community involvement in decision making. As part of this social mobilization strategy, selection of trainees is done by the field teams involving social mobilizers, who conduct series of meetings with community activists, key informants and progressive farmers to ensure participation of all key stakeholders in the decision making. The outcome of this participatory process is consensus building within the community for the selection of trainees for WLEW training course. Towards this end, social mobilizers play a crucial role in mobilizing the community for the selection of trainees for different training courses including AITs. During this process, project staff also takes the opportunity to introduce DRDF's vision and its strategy for dairy development with an aim to raise awareness of farmers on best farming practices.

The social mobilization process begins with meetings with key informants of village activists, selection of an activist for helping SMs in community meeting, initial community meeting, interview/ evaluation of interested candidates by the project team, and registration of finally selected candidates by the project team.

It is advisable to find an activist who can facilitate the mobilization process before approaching an unknown community in a village. In order to carry out the induction process effectively, community mobilizer holds introductory meetings in the selected village to identify an activist. After identification, a meeting is held with such a person to brief him on the dairy project and to strategize mobilization of the community in that village for dialogue.

With the help of an activist, social mobilization team holds meetings with community to conduct a formal brief on the project, its background and related activities in detail. The team then explains terms and conditions on WLEW training. The rationale for WLEW training is explained in the context of lack of livestock extension services as the farmers in more than 70 percent villages have no access to timely and quality veterinary services thus resulting in higher mortality rates in livestock. The project team then highlights the importance of training of women who will provide the preventive and basic curative services to farmers with an aim to reducing the morbidity and mortality rates in cattle and small ruminants thus contributing to increased milk production.

## 2.5 Selection of Candidates

The mobilization team works in a cluster of villages comprising of 10-13 villages to select 20-26 candidates for training. Preliminary area profile format will be filled during cluster formation of villages.

The following steps are involved for the selection of trainees (see Annex-1 for the detailed selection criteria):

**Meeting the candidate's family:** The mobilization team begins the process by conducting a meeting with the head of the family of the identified candidate in order to take the family into confidence regarding the selection procedure. In this meeting, the team explains the purpose of training as Livestock Extension Worker and the type of services she is expected to render to the farmers in her own village. This dialogue is crucial to win the trust of the trainee's family and to get the consent of her family members to attend the WLEW training. The agreement with the family is then formalized by filling out the Candidate Household Form.



**Final selection of the candidate:** The final selection of the candidate is done by the selection team comprising of Master Trainer and Field Manager. The mobilization team is not involved in the final selection of the candidate. Trainee Selection Sheet is then filled out by the selection team to endorse final selection.

**Training center:** Upon completion of the final selection of the candidates for Women Livestock Extension Worker (WLEW) training, a venue is selected by the mobilization team in consultation with the activists in one of the villages within the cluster.

A robust communication strategy plays an important role in the success of any project. Therefore, the Project makes concerted efforts in promotion of the activities through banners and brochures and the dissemination of the information via radio/TV/cable network. These activities facilitate mobilization and the selection of potential candidates.

## 2.6 Training of Master Trainers

Given the importance of the knowledge and skills of Master Trainers for conducting training courses for farmers, AITs and WLEWs, the project worked in collaboration with UVAS for developing a training program for Master Trainers. This one month long training course was conducted by the Continuing Education Department of UVAS at its campus in Pattoki. UVAS provided certificates to the Project's Master Trainers who attended this course. As a result, both male and female MTs have been providing trainings to dairy farmers, AITs and WLEWs.

## 2.7 Monitoring and Evaluation (M&E)

Dairy Project's M&E system is based on the Performance Monitoring Plan (PMP; attached as Annex 4). PMP is prepared with the technical help provided by Management Systems International (MSI) under Independent Monitoring and Evaluation Contract (IMEC) of USAID. The PMP was also approved in Project Steering Committee meeting on January 23, 2012.

PMP provides various results that the Project has to achieve during its life. It also provides indicators and targets against these results. The Project has to measure its performance against the indicators given in the PMP and initial work for the survey in this connection was initiated in the reporting period. However, the actual field work could only be started in December 2012. A baseline sets the benchmark against which progress can be measured. As the target performance indicators are defined in terms of the beneficiaries, it is necessary to collect baseline data once project beneficiaries are identified in each cluster of villages. Thus baseline data is being collected on a rolling basis. Similarly, end-line survey is also being conducted on a

rolling basis so that post-training situation could be compared with pre-training situations at regular intervals.

Dairy Project has also established a process monitoring system. Field M&E officers and data entry operators were hired for monitoring field activities and recording the data generated on various data collection tools that have been developed to internally capture the data about training, trainees and post-training activities of the beneficiaries. M&E Department produces reports such as Biweekly Report and Quarterly Progress Report on the basis of this data. The results (for indicators in the PMP) reported in the impacts sections of the present report have been prepared on the basis of this internal data. These will be refined once the third-party data through surveys is available.

As various M&E data needs to be stored in an information system so that it could be easily retrieved and analyzed, the project is also developing an M&E information system for storing the project data. Data from this system could be exported to MS Excel for further analysis.

## **2.8 Component 1: 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 aim of these interventions is to change the mindset of dairy farmers and encourage them to adopt new and better dairy farming practices. The Project has an ambitious plan to train 9,000 farmers and 100 farm managers over a period of three years with the following specific targets to achieve:

- Two-day training for 5000 traditional farmers
- Four-day training for 3700 for progressive farmers
- One month training for 300 commercial farmers
- Training of 100 farm managers

During the year in review, the project has not trained any farm managers. Farm manager trainings will be beginning in the next year.

### **2.8.1 Training Methodology and Locations**

The Dairy Project started with two model trainings and demonstration farms of Nestle at Sukheki, Pindi Bhattian, District Hafiz Abad and Renala Khurd, district Okara. Customized training modules were developed for the training and first training was conducted in October

2011 by Field Manager (Farmer Training) with a first group of 23 farmers. However, as bringing farmers to these model farms from long distances was both costly and time consuming, the project, therefore, decided to arrange two more model farms at Khanewal, District Khanewal and Kamalia, District Toba Tek Singh. Owned by private farmers, these farms have the necessary infrastructure and facilities suitable for conducting training sessions for farmers, thus reducing transportation costs and enhancing training effectiveness. Trainings on these farms started, in the month of April following contractual agreements signed with the owners.

All initial trainings were two-day trainings. Four-day trainings for dairy farmers having minimum 10 adult dairy animals began at Khanewal dairy farm from April 17 with a first group of 27 farmers.

### **Dairy Farmers Trainings for Beneficiaries from KPK, Sindh and Balochistan**

As mentioned earlier, Dairy Project has to train 800 dairy farmers from other provinces. The break-up for other three provinces is as follows:

- 300 Farmers from Sindh
- 250 Farmers from KPK
- 250 Farmers from Baluchistan

For training of farmers from other provinces, representatives of Dairy Project held a meeting with Nestle Dairy Development team of Sindh Zone for the selection of farmers and AITs for training from Sindh Province. The TORs about the selection were discussed with them. Dairy Project started training for participants from other provinces from the month of June. Of the total number of dairy farmers obtaining four-day training, the number of dairy farmers trained from the Sindh province was 152.

During the reporting period (July 14, 2011-July 30, 2012), Dairy Project trained 3591 dairy farmers. Of these, 3102 farmers were provided with two-day training, while 489 farmers were provided with four-day training. The map at preceding pages shows the districts from which these beneficiaries were selected.

Batch-wise detail of the trainings is provided at Annex-2. Details of farmers trained at different regions are given in table 2.

**Table 2: No. of farmers trained in the project area**

S. No	Zone	No. of farmers trained		Total
		2 days training	4 days training	
1	Pir Mahal	1319	177	1496
2	Chichawatni	1345	139	1483
3	Multan	438	21	459
4	Sindh	0	152	152
<b>Total</b>		3102	489	3591

### **Dairy Farmer brings Positive Change**

“The training sessions were so relevant and practical; people willing to get these trainings were being facilitated to a great extent, and in such a situation, who wouldn’t have agreed to go for it?”

Now I’m well-informed about my animals’ needs and get more milk production than before. Making use of the best farm practices we were taught, the daily output has increased from 50 liters to 65 liters, along with substantial increases in income

Abbas Ali Bhatti Dairy farmer

District Toba Tek Singh

### **Training Curriculum**

Training contents of two days farmer training session include introduction to livestock breeds, cross breeding feeding of dairy animals, yearly fodder planning, silage and hay making, calf rearing, health (FMD and HS, Vaccination), internal and external parasite control, Mastitis and its control, artificial insemination and its importance for breed improvements, milk and farm hygiene, sire selection criteria, body scoring, Estrus synchronization, heat detection at farm Level, shed design, Oxytocin and dilemma of its frequent use, silage, and , record keeping. Training contents of four days farmer training is more or less the same with great details.

Dairy Project provided training certificates and initial support kit to all these trained farmers at completion of the training. The kit includes the following items: teat cup; dip solution; drenching syringe; de-wormer; feeding nipple; notepad; and bag.

In the second quarter of 2012, training contents of one-month training of dairy farmers and Farm Managers were prepared and submitted for review by Dr. Makhdoom Abdul Jabbar of. After the approval, a training manual for one-month training was prepared.

## Follow-up Support

The team also provided technical support to trained farmers at their farm in case of shed designing and other technicalities regarding dairy farming and

## Farmer Trainings on Silage Making

During its first year, Dairy Project ran a silage making campaign in the project targeted villages. The main objective of conducting the silage-making shows is to instill in dairy farmers minds importance and utilization of silage in animal production system and mitigating feed scarcity risk particularly in the summer season. For this purpose, four maize choppers were purchased to be used in the silage demonstrations in selected zonal areas of the project.



Dairy Project facilitated a meeting of the Pioneer Seed Company's representative with the selected farmers to introduce silage making for nutritional improvement of dairy cows. Dairy Project selected a group of farmers to plant maize as demonstration plots for silage making. The criteria for the selection of farmers included: willingness and motivation, has good fertile land for maize sowing along with technical know-how of growing maize and availability of sufficient irrigation water. Among these selected farmers,



corn seeds for silage were distributed. Later, Dairy project’s follow-up teams ensured sowing of these seeds in the field. Subsequently, follow-up teams visited these farmers to check their crops and give them further technical support for silage making.

In the reporting period, total 68 silage making shows were conducted (37 in Chichawatni and 31 in Pir Mahal) in 46 villages. Around 6500 farmers participated in these shows. Through these demonstrations, the project aims to transfer the fodder preservation techniques to targeted communities. Through effective transfer of such techniques to the dairy farmers, milk yields will increase significantly due to the better nutritional value of the feed given to dairy animals.

### 2.8.2 Impact of Farmer Trainings:

**“Now I am feeding Vanda – a high quality animal feed – to my dairy animals, thanks to the efforts of the Dairy Project team.”**

*Syed Iqrar Shah, dairy farmer from District Sahiwal*

The process of change in dairy farming starts with awareness-raising and subsequently application of new knowledge in dairy farms. Adopting new best practices leads to increase in milk yields which, in turn, translate to increased incomes (assuming costs and milk price as constant). Dairy Projects, in this way, is bringing a paradigm shift in the prevailing primitive methods of dairy production and thereby in income and employments levels in the project-intervened villages.

Various output and outcome level results, based on sample based internal training and follow-up data, are shown in the table below. The results show that 55 percent of the trained farmers are practicing and applying at least three new best practices. An increase in milk production and income is expected only if farmers start adopting new practices. A small sub-sample of those farmers who have adopted the practices of deworming, vanda feeding and free access to water shows that there has been 19 percent increase in milk yield per animal which has led to 21 percent increase in their dairy farm incomes.

**Table 3: Impact of Trainings**

Indicator	Target	Achievement	Remarks
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Average increase in the project-assisted household real annual income from dairy activities relative to the baseline	At least 10 percent increase in the household's income from dairy activities.	21 percent increase	Target over-achieved.
Use of best dairy farm practices among project-assisted farmers increased (adoption of at least three new best practices)	60 percent farmers adopted three more best practices	55 percent farmers adopted three more best practices	Target under-achieved.
Number of farmers/farm managers trained	3116 Farmers for 2-day and 4-day training and 25 Farmers/farm managers for 30-day training	3591 Farmers	Target over-achieved for 2-day and 4-day trainings Target under-achieved for 30-day training
Incidence of Hemorrhagic Septicemia and Foot and Mouth Disease in i) dairy animals owned by project-assisted households and ii) dairy animals of farmers assisted by WLEWs	At least 20 percent reduction in the incidence on average.	TBD	Data on this indicator is being collected through third party survey.
Average monthly (per animal owned by project-assisted household) quantity of milk produced	At least 10 percent increase in milk yield.	19 percent increase in milk yield for farmers adopting three practices (deworming, vanda feeding, and free access to water)	Target over-achieved

Number of project-assisted farmers trained in business practices, and book-keeping	3116 Farmers and 25 Farmers/farm managers	3591 Farmers	Target over-achieved for 2-day and 4-day trainings Target under-achieved for 30-day training
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## 2.9 Component 2: Training and Support for Artificial Insemination Technicians (AITs)

The objective of dairy project trainings through this component is to improve the provision of AI services to foster good quality breeds for improving livestock productivity and enhancing incomes of rural youths assisted by the project. The Dairy Project's AI trainings are providing a source of earning to the unemployed youths, empowering them to become self-employed entrepreneurs by offering breed improvement services to dairy farmers. The overall aim is to ensure that through better breeding, farmers are able to increase their milk production and incomes. As a result, income opportunities for both farmers and AI technicians are being created.

Also, poor genetics is a major reason for low productivity per dairy animal. In order to improve the genetic potential of existing breeds, there is an immense need to introduce the trend of cross breeding through Artificial Insemination techniques for better milk production and profitable dairy farming in Pakistan.

The dairy project aims to train a total of 2000 individuals as AITs with 100 individuals each from Khyber Pakhtunkhwa, Sindh and Balochistan provinces.

### 2.9.1 Training Methodology:

To begin with, AITs are given five weeks of training with additional support and backing provided during follow-up for each batch of AITs by the project team.

#### Training Curriculum

Training comprises of both the theory as well as practical exercises related to artificial insemination and the safe handling and maintenance of the equipment. The theory contains knowledge about the history of AI along with its advantage and disadvantages, anatomy and functions of female reproductive system, estrus cycle, heat detection, artificial insemination, fertilization, factors affecting the conception rate, methods of pregnancy diagnosis, and tagging and recoding of animals. The theory is applied in the practical portion which is done at lab

animal farms, slaughter houses and open animal markets. For the practical component, slaughter house training in particular, includes the post slaughter examination of reproductive organs. Dairy Project's AI team at Burj Attari has also made dummy cow for AI training. A steel frame was made by Master Trainers for the practice of students on the pelvic bone.



a

Besides training in AI techniques, the project realizes the need to teach the trained AITs in basic bookkeeping and business skills which will aide them in becoming successful businessmen. The dairy project also helps them in building linkages with input suppliers and other trustworthy vendors playing the role of middleman.

### **Follow up and Support Services**



Upon successful completion of the training course, these AITs are provided with follow-up assistance to establish themselves as small scale entrepreneurs. A certification and graduation ceremony is held for each batch of these AITs wherein all participants are provided with a support kit to jump-start their businesses and hence improve incomes. The

distribution of kits plays a vital supportive role in launching the careers of ordinary and unemployed individuals as AITs. The kit includes essential equipment such as AI cylinder, liquid nitrogen cylinders, insemination guns, semen straws, fifty semen doses, gum boots/sleeves and an AIT record register. To further facilitate these AITs, the project has also introduced another incentive in this program which is the allocation of motorbikes to those AITs showing a keen interest while training as it is based on their performance.

Dairy Project's follow-up team conducts the follow-up meetings at two different frequencies. Meeting with a batch are conducted on a weekly basis in the first month after completion of the training. After first month, frequency of such meeting changes into monthly basis and weekly meetings are now conducted with the latest batch of AITs. The purpose of these meetings is to solve issues of AITs, improve their technical skills and help them strengthen their market linkages. The issues related to supply of quality semen to AITs are also discussed and resolved in the follow up meetings. During the induction meetings, AITs are also formally introduced to communities to market their Artificial Insemination services for breed improvement.

### **Market Linkages**

With the graduation of first batch of AITs on Oct 27, 2011, the project has supported a total of 8 batches of AIT training courses 439 AITs were certified as of July 30, 2012. The batch wise details of AITs trained are provided in Annex-2.

During the review period, Dairy Project has also developed linkages with Semen Production Units (SPU) of Qadirabad to get quality semen of Friesian and Buffalo bulls for onward insemination by AITs. The project has also arranged a mobile outreach supply network for semen distribution to AITs through DRDF. In order to ensure quality semen supply and sustainability of the AITs, the trained AITs are linked with DRDF's semen supply network in the project villages. However, AITs are free to purchase semen from other suppliers as well. In this network, three semen supply teams are working in Pir Mahal, Chichawatni and Multan zones. These teams are mobile and supply semen at fixed supply points in their respective areas.

### **Motorbike Distribution**

#### **Improving Breed for Better Yields**

“At this point, I'm no more recognized solely as an agricultural or dairy farmer, but rather I'm a businessman, all set to make quick returns. And I am hopeful to earn more than PKR 4000/- every month.”

“My family is poor and we wouldn't have been able to afford the cost of such a training course. In such a scenario, one can imagine how useful it will be to be for my family, the community and above all for my personal self. Now, I look after the animal in a better and improved manner and contribute towards the greater goal of breed improvement. Other than this, I've gained a self-confidence that is beyond words.”

**Noor ul Ameen** (AIT), Jhang District

All project-trained AITs will be provided with motorbikes to support their businesses conditional upon fulfilling the performance criteria. The performance criteria have two elements:



- **Number of Inseminations:** Minimum 30 inseminations are required in the first 90 days after completion of the training,
- **Conception Rate:** Minimum conception rate of 40 percent is required. For checking this, a palpation test is conducted on five randomly selected animals which have been inseminated 60 days before. Three animals must be pregnant as per the criteria.

First performance evaluation survey was conducted on April 10 and 11, 2012 by the Master Trainers for AI training. Dairy Project conducted its first Motorbike Distribution Ceremony at the University of Veterinary and Animal Sciences (UVAS) in Lahore on May 30, 2012 where USAID Mission Director Dr. Andrew Sisson distributed 50 motorbikes to high performing project-trained AITs. Details are presented in Section E. Later, after August 2012, three more motorbike distribution ceremonies have been conducted and motorbikes have been awarded to 200 more AITs.

### 2.9.2 Impacts of AI Trainings:

Dairy Project's aim to create employment opportunities for rural youth in the livestock sector is yielding desired fruits. Though the project faced difficulties in training AITs by the required number due to strike at the Lahore Slaughterhouse, it has successfully established the trained AITs as self-employed entrepreneurs. The initial results show that average per month number of AIs is around 20 (i.e. 0.6 AIs per day) while average per month no of pregnancy tests (PTs) are 17. This has resulted in a monthly income of PKR 4000 for AITs. Number of insemination procedures to pregnancy is quite high at 1.2 inseminations for one pregnancy (or 80 percent success rate). This is due to the fact that due to current data constraints number of pregnant animals as a percent of number of total animals checked is taken as a proxy for this indicator. Other results of AI training are presented in the table below.

**Table 4: Results of AI Training**

<b>Indicator</b>	<b>Target</b>	<b>Achievement</b>	<b>Remarks</b>
Average per month income of AITs from providing AI services	Income of at least Rs. 3,000 per month	Net Income of Rs. 4000 per month per AIT	Target over-achieved.
Farmers' use of AI services as measured by number of insemination procedures performed	At least one insemination per day	0.6 inseminations per day	Target under-achieved.
Number of villages served by project-trained AITs	1608 villages	1287 villages	Target under-achieved.
% of AIT trainees providing professional services to communities	60% of AITs	98% of AITs	Target over-achieved.
Ratio of insemination procedures to pregnancy	At most 1.7 insemination per pregnancy	1.2 inseminations per pregnancy	Target over-achieved.
Number of AITs trained	536 AITs	439 AITs	Target under-achieved.

Number of villages served by project-trained AITs offering services to farmers	1608 villages	1287 villages	Target under-achieved.
Percentage of project-trained AITs introduced to input suppliers	100%.	100%. (estimated)	Target achieved.
Number of AITs trained in book-keeping, business management	536 AITs	439 AITs	Target under-achieved.

### 2.10 Component 3: Training and Support for Women Livestock Extension Workers (WLEWs)

Dairy Project’s objective to conduct trainings for WLEWs is to increase the use and availability of livestock services provided by WLEWs for improving livestock productivity and enhancing incomes of rural females assisted by the project. This objective of improving overall livestock productivity is being achieved through empowering literate village based females to become entrepreneurs. Dairy Project aims to train a total of 5000 unemployed women as WLEWs to improve livestock extension services in the project villages.

Initially, the project planned to offer two types of trainings namely: Animal Health training for Livestock Health Workers (LHWs); and Livestock Business training for Livestock Business Entrepreneurs (LBEs).

However, later, this differentiation was eliminated and it was decided that similar training would be provided to all WLEWs and after the training it will be decided which WLEWs will be established as LHWs and which one will be established as LBEs.

## Training Curriculum of WLEWs

The training duration of the course is spread over a one month period. All WLEWs, at the end of this one month training, are tested through written as well as oral viva tests by academic staff of UVAS for accreditation. The topics of WLEW training course consists of basics in animal health management, preventive animal health measure,



identification of the most common diseases, immunization and treatment, animal nutrition and hygiene, and livestock management. These extension workers are also provided trainings in feed supply and milk collection to give them additional knowledge in business management for their growth as entrepreneurs. Keeping this idea in mind, WLEWs are also equipped with basic bookkeeping expertise as well as facilitating their linkages with financial services and input suppliers along the dairy value chain. WLEW trainings are conducted in village clusters, so that women can attend training near their homes. A training camp is set up on each site temporarily. The project arranges for transport to and from the training venue. Their master trainers are women veterinary graduates.

Besides providing training as WLEWs, master trainers also conduct Farmer Help Camps amidst training sessions in their respective villages to reinforce their technical skills and boost their morale and confidence with regards to dealings with the surrounding community as they handle sick animals for various treatments. The cases dealt with in such training camps are related to deworming, diarrhea, mineral deficiency and ingestion etc. in the next stage, trained WLEWs visit dairy farms established as training centers where they are provided knowledge about silage making, animal care, shed design, milk test, and so on. Dairy Project also arranged visits of WLEWs to the Civil Veterinary Hospitals to link them with the Veterinary Officers and Assistants. It is expected that such visits will strengthen market linkages of WLEWs which will prove to be fruitful in future.

Since the initiation of WLEW training, the project has trained 711 WLEWs and supported 443 women as Livestock Business Entrepreneurs (LBE). **Annex 2** shows the number of WLEWs trained batch wise.

**Table 5: No. of WLEWs trained in the project area**

<b>S. No.</b>	<b>Region/Zone</b>	<b>No. of women trained as WLEWs</b>	<b>No. of Livestock Business Entrepreneurs supported</b>
<b>1</b>	Pir Mahal	365	214
<b>2</b>	Chichawatni	362	219
<b>Total</b>		727	433

After finishing the training course, WLEWs are formally inducted in to their respective villages through an induction meeting. In this meeting Dairy Project's Master Trainers formally inform the community about the technical skills WLEWs have gained through WLEW training and the type of services that she is capable of providing the farmers.

Of the two WLEWs from a village, the WLEW securing higher marks is established as LHW while the other works as LBE.

### **Follow up and Support Services provided by Dairy Project**

LHWs are given a kit containing veterinary medicines and other necessary tools to provide animal health services to the farmers in their respective villages.

Other WLEWs are established as LBEs. These LBEs are given vanda (concentrates) kit. The project initially provided medicine and vanda kit to LHWs and LBEs but later this was stopped due to restriction on purchase of these items. Subsequently approval from USAID was obtained on such purchases and now the supply of kits of LHWs and LBEs has resumed. The following table shows number of

### **Empowering Rural Women**

"I'm glad I've been given a direction. Now, my future would be different from that of a conventional village girl. I'm empowered. I'm confident and I am capable of providing for my family. I am working on a facet that was overlooked earlier which created a demand for my services. I am helping the people of my community raise their livestock in a much better way, thus contributing towards enhancing livestock productivity and as a result, overall prosperity among fellow beings."

**Bushra Yasmeen (LHW)**

Kamalia district

medicine and vanda kits issued in the reporting period.

**Table 6: Summary of Kit Distribution**

Batch #	Summary of Kits Distribution					
	Chichawatni		Pir Mahal		Total	
	Medicine	Vanda	Medicine	Vanda	Medicine	Vanda
	<b>Number of LHWs</b>					
<b>1</b>	43	34	46	39	<b>89</b>	<b>73</b>
<b>2</b>	63	-	55	56	<b>118</b>	<b>56</b>
	<b>Number of LBEs</b>					
<b>1</b>	-	-	-	10	-	<b>10</b>
<b>Total</b>	<b>106</b>	<b>34</b>	<b>101</b>	<b>105</b>	<b>207</b>	<b>139</b>

Dairy Project's follow up team conducted the individual follow-up of WLEWs and also conducted the monthly group meetings. In the individual visits, the teams resolves the issues faced by WLEWs in their community and provides technical guidance, while in the weekly meetings, teams check the progress of WLEWs, and addresses issues related to market linkages and the supplies of medicines. The follow up team also visited the training classes of WLEWs to introduce their activities. On the whole, follow up visits have been very useful to both the trainers and the trainees as it enables both the parties to see the extent of services they are providing, identify their problems and resolve their issues.

### **2.10.1 Gender Empowerment**

Dairy Project realizes the need to make special arrangements for the female population in Pakistan which comprises of more than 50 percent of the total population of the country. As such, the project has dedicated a special component to fill this void in the traditional socio economic structure of the country where women are treated as a minority. As discussed earlier, through this component, the project aims to train rural women in animal health management. Secondly, female gender is adequately represented and employed in project's zonal offices as well. Both these steps are taken, besides many others, to ensure that job opportunities are created for women, which subsequently improve their standard of living.

Moreover, women master trainers are hired especially to accommodate the reservations of WLEWs. Additional security measures are also taken for the security of WLEWs to and from the training centers.

### **2.10.2 Impact of WLEW Trainings**

The trainings focus on livestock management, which is being passed on in the form of increased use and availability of livestock services provided by WLEWs. An indicator of success in this area is that farmers' access to services of self-employed WLEWs has increased in project-focus areas. Not only is this providing project-trained WLEWs with income boosts and better lifestyles, it is also giving farmers increased access to extension services which were otherwise not readily available. Consequently, this ensures increased milk production and incomes in the dairy sector.

Dairy Project has started realizing its objective of empowering rural women through livestock based business opportunities. It has successfully trained 1160 WLEWs. However, as mentioned earlier, due to restriction on purchase of medicine and vanda, all WLEWs could not be established as entrepreneurs as support kits could not be issued to all WLEWs. This has adversely affected the expected results. The sample based data for first batch of WLEWs (as support kits were provided timely this batch) show that 94 percent of WLEWs are active and are attending 32 cases per month and earning PKR 2500/- per month. The incomes of WLEWs and other results of WLEW training are presented in the table below.

**Table 7: Impact of WLEWs**

<b>Indicator</b>	<b>Targets</b>	<b>Achievement</b>	
Average per month income of WLEWs from livestock services relative to the baseline	Income of at least Rs. 3,000 per month	Rs. 2,500 per month	Target under-achieved.
Incidence of Hemorrhagic Septicemia and Foot and Mouth Disease in dairy animals of farmers assisted by WLEWs	At least 20 percent reduction in the incidence on average.	TBD	Data on this indicator is being collected through third party survey.
Number of women trained	1088 WLEWs	1160 WLEWs	Target over-achieved.
Number of WLEWs operating/ managing project-supported milk collection points in project-assisted communities	At least 20 Milk Collection Points	None.	Target not achieved.
Percentage of farmers using services of Women Livestock Extension Workers (WLEWs) relative to the baseline	At least ten percent farmers using services of WLEWs.	TBD	Data on this indicator is being collected through third party survey.
Number of villages served by project-trained WLEWs	784 villages	300 villages	Target under-achieved.

Number of project-trained WLEWs providing services as self-employed extension workers	At least 60 percent of the trained WLEWs providing livestock services.	94 percent	Target over-achieved.
Number of farmers assisted/provided with services by project-trained WLEWs	At least 10 farmers per month for each active WLEW.	10 farmers per month for each active WLEW. (estimated)	Target achieved.
Number of WLEWs offering feed, nutrients, and other inputs for sale to farmers	653 WLEWs	327 WLEWs	Target under-achieved.
Percentage of project-trained WLEWs introduced to input suppliers	100%	100% (estimated)	Target over-achieved.
Number of WLEWs trained in business practices, book-keeping, and milk collection	1088 WLEWs	1160 WLEWs	Target over-achieved.

## 2.11 Mass Communication and 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. This component aims to increase awareness through print and electronic media



campaigns, documentaries, a dynamic website, and print/audio video success stories (Annex 3) among other tools.

There are a number of media-related activities which the Dairy Project has undertaken, including a full page newspaper supplement in Daily Jang (Urdu), to introduce the project and its three trainings to the masses. This supplement was entitled 'Dairy Project Economic Empowerment through Dairy and Livestock Development' and appeared in January 2012. In February 2012, the Dairy Project participated at the Dawn Agri Expo 2012 in Lahore, where the project setup a stall. During that same time, the Communications department ensured press coverage of the Dairy Project's Master Trainers' Graduation/Certificate Distribution Ceremony held at the University of Veterinary and Animal Sciences (UVAS) Lahore. The press release was titled 'U.S. Assistance Supports Dairy and Livestock Productivity in the Punjab' and it appeared in leading newspapers.

In March 2012, an extensive radio campaign was rolled out to raise awareness and mobilize potential beneficiaries on the three types of project trainings in Urdu, Punjabi and Seraiki in project's activity districts.

The campaign was run at four regional channels in Punjab, including FM 103 Multan, Radio Pakistan Multan, FM95 Sahiwal, and FM 96 Toba Tek Singh.



Also, the Punjab Livestock and Dairy Development Department's (L&DD) Donor Conference was held in March 2012, and it was co-hosted by USAID-DRDF Dairy Project held at Avari Lahore. The Communications team ensured press coverage of this event and a press release entitled 'The United States Supports Dairy Development in the Punjab' appeared in leading newspapers.

A print media campaign on best dairy farming practices in leading Urdu regional and national newspapers was launched for targeted outreach. This activity was carried out during April and May 2012, and was run in five Urdu and Sindhi language newspapers. Moreover, a documentary on silage training was developed in July 2012, which shall be aired on major TV channels during the silage-making season in 2013.

In order to ensure effective project promotion and dissemination for internal and external stakeholders, promotion and training material have been designed and produced, including streamers, banners, boards, modules, lesson plans (for farmers, AITs, WLEWs), flip chart, brochures, attendance and record registers, and certificates for beneficiaries.

The Communications Department also developed success stories and photo features submitted to USAID and published two editions of its newsletter 'Dairy Portal' shared with project stakeholders. Furthermore, the Dairy Project's website ([www.dairyproject.org.pk](http://www.dairyproject.org.pk)) was developed and made live, and the Facebook page ([www.facebook.com/USAIDairyProject](http://www.facebook.com/USAIDairyProject)) was developed as well.

## **2.12 Policies, Procedures and Systems**

As part of the contractual agreement with USAID, the Project was required to fulfill all ten conditions listed in the Cooperative Agreement. The Project has reviewed and finalized eleven policies and procedures related to financial management, audit, procurement, IT and HR in close consultation with OFM and OAA, and both offices have cleared their policies for implementation with some amendments. The DRDF Board of Directors has approved all new policies and procedures covering the entire breadth of DRDF operations. As a result, it is now mandatory for DRDF to comply with USAID requirements regarding financial and management standards.

In order to strengthen field operations, procurement department sought approval of USAID through Negotiation Memos for the purchase of vehicles. As a result, the procurement department has purchased 23 vehicles including nine Toyota Hilux trucks for onward distribution to the field offices in order to facilitate mobility of the project staff. Furthermore, as the Project had also received approval of 2000 motorbikes from USAID. The first batch of 50 motorbikes was distributed among the eligible AITs in a ceremony held at UVAS on May 30, 2012. Provision of motorbikes will enhance the outreach of AITs for Artificial Insemination services in the project villages. Moreover, as part of modernizing its communication infrastructure, the Project is planning to install Video Conferencing facilities at the PMU office.

On the human resource front, the positions of HR and Admin Manager, and Accountants for PMU and the field offices have been filled up. Additional hiring on other staff positions including M&E officers and data entry operators is expected shortly as interviews have already been conducted. Moreover, 21 social mobilizers have been moved from HRS<sup>3</sup> to DRDF's pay roll.

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<sup>3</sup> Human Resource System – a global company

The HR and Admin Department has initiated the process of DRDF's registration with EOBI to access long-term old age pension benefit scheme. Another important achievement of the HR team during the review period was provision of training on HCM module in ERP software.

### **2.13 Compliance with the pre-award assessment conditions**

The Project has submitted a follow-up report on risk mitigation framework with reference to OAA/ OFM joint review which was held in September 2011. The report highlighted four key areas of USAID's concern, including Procurement, HR, Security and IT. The USAID officials subsequently visited PMU on November 28-29, 2011 for follow-up review of Pre-Award Assessment Report. The USAID team concluded that the project has successfully mitigated six of the ten high risk actions. Thus the team identified four areas which require further attention of DRDF management. These were: formation of audit committee; compliance with applicable laws; budget, planning, monitoring and review process; and information technology.

### **2.14 Enterprise Resource Planning (ERP)**

ERP software named xTuple is implemented in Dairy Project which comprises of following modules:

#### **a. Fixed Assets Depreciation and Maintenance Module**

Starting Date: 17<sup>th</sup> February 2012                      Implementation Date: 10<sup>th</sup> May 2012

xTuple's Fixed Assets Depreciation and Maintenance Module, for full integration of fixed asset register and depreciation schedules with xTuple.

#### **b. Purchase Module**

Starting Date: 17<sup>th</sup> August 2011                      Implementation Date: 25<sup>th</sup> December 2011

xTuple's Purchase module manages all your interaction with Vendors, including Purchase Requests, actual Purchase Orders, Vouchers, and Receipts. It is fully integrated with the rest of the system in real time and has consolidated and optimized purchasing procedures across the organization. It keeps track of Vendor Performance on Rejected Materials, Delivery Date Variances, and Price Variances.

#### **c. Accounting Module**

Starting Date: 17<sup>th</sup> August 2011                      Implementation Date: 10<sup>th</sup> October 2011

xTuple's accounting module features a powerful General Ledger, which is tightly integrated in real time with the other modules of the system. It provides flexibility in defining Chart of

Accounts, with support for four Segments in Account Numbers, each of any length. We can define an unlimited number of Accounting Periods per year, and certain users have the option of posting into closed Periods. xTuple supports Standard Journals and Standard Journal Groups, with Expiration and Effective Dates for simple Period-End Posting. Financial Reports are completely user-definable, and the systems open architecture facilitates simple interfaces to third party applications such as spreadsheets, payroll, and fixed asset depreciation. Accounts Payable supports User-Defined Check Formats, assigned on a Bank Account basis, and full Reconciliation capability. We have total control over check runs, and can look at historical purchasing data, user-defined aging of open items, and time-phased cash requirements. Accounts Receivable allows for easy creation and posting of Invoices, management of Cash Receipts, Debit and Credit Memos, and time-phased cash projections and open receivables.

#### **d. Human Capital Management Module**

Starting Date: 15<sup>th</sup> December 2011

Implementation Date: 19<sup>th</sup> February 2012

Software is implemented for Human Resource Department and Human Capital Management (HCM). HCM offers a complete suite of human capital management / human resource management tool. It includes employee information management, employee attendance, and employee payroll that are directly integrated with Accounts module. Salary is processed from accounts module as well as Employee's leave management, Performance evaluation and many other HR tools. Some of the distinctive features are as follows:

- **Personnel Management:** The personnel management comprises of HR master-data, personnel administration, recruitment and salary administration.
- **Organizational Management:** Organizational management includes, organizational structure, staffing schedules & job description.
- **Payroll System:** Salary management & attendance management for salary calculation.
- **Time Management:** Time management includes time recording, absence & leave management.

## **Chapter 3: ISSUES, LESSONS LEARNT, AND WAY FORWARD**

### **3.1 Challenges**

The first and foremost challenge faced by the project was a delay in implementation and execution of its activities due to unstable security situation in the Punjab province. At the time of the launch of the project, activity targets could not be fully achieved due to lack of staff such as social mobilizers, monitoring persons and delay in finalization of office buildings/training sites. Key positions at PMU remained vacant till November 2011 which significantly hampered the development of M&E and HR systems.

In terms of training activities, the planned target number of AITs could not be trained due to unavailability of dairy cows and buffaloes in slaughter houses, which resulted in reduction in the number of AIT trainees from 80 to 60 in March 2012. Nevertheless, the project built its technical and institutional capacity to meet the target by the end of the second quarter of 2012. The issue of limited number of cows and buffalos at the slaughter houses was resolved by purchasing pregnant and dry cows as experimental animals for practical training of AITs as part of their training. Although AITs were given 50 dozes of semen as part of their kit, sustained supply of quality semen is essential to maintain their services on a continuous basis. Due to the lack of quality semen supply network accessible to AITs at the targeted project areas, a personal supply network of the project was developed to ensure quality of semen for higher conception rates. Furthermore, this arrangement contributed to sustainability of the businesses of project-trained AITs.

Another challenge in meeting the targets was the delayed approval of motor bike procurements and their distribution policy from USAID which consequently affected the schedule of distribution amongst the certified AITs. The first batch of 50 motorbikes was distributed on May 30, 2012 in a ceremony held at UVAS in the presence of USAID officials.

### **3.2 Lessons Learnt**

Despite initial challenges in the delayed implementation of the project's activities, Dairy Development Project has made good progress over the past ten months. The response from the farmers, communities, UVAS, Punjab Dairy Development Project and other stakeholders towards initiative in dairy development has been encouraging. All these parties have extended support for the implementation of the project activities. The mass awareness campaign created by the project through its training courses and communication campaigns has highlighted the importance of improved dairy farming practices. Although changes are visible in project villages,

it will take time to adopt the improved dairy farming practices especially breed and feed improvement, and disease control measures.

The project team is learning a great deal from the implementation of the activities in the field; apart from technical aspects, there are important lessons to be learnt by the project's staff members learnt from community mobilization. The field teams are now more self-confident and poised in dealing with the local communities for the selection of trainees. The field teams have developed good rapport with project's key stakeholder due to their relentless efforts. In this respect, the project has also built its credibility as a capable organization. The progress on implementation will accelerate even further in the coming year as it tries to make up for the lost time by meeting the missed targets.

Also, the project's follow up team must be trained in data collection on the performance of AITs and WLEWs in terms of outcomes and their broader impact on increasing livestock productivity for the sake of comparison from one year to the other and also with similar dairy projects.

Another challenge faced by the communications department is regarding the branding and marketing of the dairy project keeping in view the current unstable political situation of the country. However, Dairy Project has pragmatically followed branding and marketing guidelines and no unpleasant incidence has occurred so far.

### **3.3 Way Forward**

Since the project has developed all necessary administrative and technical infrastructures during the year in review, implementation will speed up its pace in the upcoming year. With improved technical and institutional capacities for training course and approval of medicine and vanda purchase, the project will catch up on the missed targets as well as meeting the coming year's targets. This will also improve budget utilization pattern, thus avoiding under spending. Moreover, the selection of the candidates for next batches of all three training courses will be made on time as social mobilization teams have developed adequate experience in conducting community dialogues.

On the communication front, the Project will air series of documentaries on the success stories to reach out to the millions of potential farmers all over Pakistan. Efforts are also underway to broadcast radio programs on local FM radio channels to educate farmers on improved dairy farming practices.

Follow up on trained farmers, AITs and WLEWs will continue in the coming year with an emphasis on the adoption of improved farming practices and extension services to the farmers.

The project will create market linkages between AITs and LHWs with input suppliers for the supply of quality semen and veterinary medicines to ensure continuing services.

## Annex 1: Projected Expenditures

	Actual	Projections		
	Year 1	Year 2	Year 3	Total
Total Management Staff (PMU Staff Salaries)	87,501	232,282	253,187	572,971
Total Direct costs Master Trainers/ Field Training (Salaries)	149,972	515,015	561,366	1,226,353
Total Fringe Benefits (Direct Labor)	24,382	61,053	145,263	230,698
Total Consultants	23,213	243,474	222,669	489,356
Sub Total Travel	122,449	405,058	248,693	776,200
Total Procurement for Direct Training Operations	946,854	798,685	925,162	2,670,701
Total Equipment and Supplies (training essential basis)	449,127	1,151,027	1,277,690	2,877,844
Total Communications	157,734	816,763	366,702	1,341,199
Total Direct costs Field operations	409,033	964,288	876,846	2,250,166
Admin & Essential Expenses	185,700	508,255	469,729	1,163,684
Direct Costs Training/ Facilitation / for farmers	85,971	192,897	140,737	419,605
	2,641,936	5,888,796	5,488,045	14,018,776

## Annex 2: Summary of Trainings

### Batch-wise Details of 2-days Farmer Training at Sukheki and Sarsabz Farms

Batch No.	Date in	Date out	No of Farmers
1	11-Oct-11	12-Oct-11	23
2	14-Oct-11	15-Oct-11	22
3	24-Oct-11	25-Oct-11	21
4	3-Jan-12	4-Jan-12	29
5	5-Jan-12	6-Jan-12	27
6	7-Jan-12	8-Jan-12	25
7	9-Jan-12	10-Jan-12	26
8	11-Jan-12	12-Jan-12	29
9	17-Jan-12	18-Jan-12	30
10	19-Jan-12	20-Jan-12	30
11	21-Jan-12	22-Jan-12	28
12	23-Jan-12	24-Jan-12	30
13	25-Jan-12	26-Jan-12	25
14	31-Jan-12	1-Feb-12	24
15	2-Feb-12	3-Feb-12	30
16	4-Feb-12	5-Feb-12	29
17	7-Feb-12	8-Feb-12	26
18	15-Feb-12	16-Feb-12	28
19	17-Feb-12	18-Feb-12	28
20	19-Feb-12	20-Feb-12	29
21	21-Feb-12	22-Feb-12	28
22	22-Feb-12	23-Feb-12	30
23	23-Feb-12	24-Feb-12	21
24	24-Feb-12	25-Feb-12	27
25	25-Feb-12	26-Feb-12	28
26	26-Feb-12	27-Feb-12	30
27	28-Feb-12	29-Feb-12	29
28	6-Mar-12	7-Mar-12	25

29	13-Mar-12	14-Mar-12	25
30	16-Mar-12	17-Mar-12	28
31	18-Mar-12	19-Mar-12	27
32	20-Mar-12	21-Mar-12	31
33	21-Mar-12	22-Mar-12	26
34	26-Mar-12	27-Mar-12	29
35	28-Mar-12	29-Mar-12	31
36	30-Mar-12	31-Mar-12	32
37	3-Apr-12	4-Apr-12	32
38	5-Apr-12	6-Apr-12	24
39	10-Apr-12	11-Apr-12	28
40	12-Apr-12	13-Apr-12	32
41	16-Apr-12	17-Apr-12	29
42	18-Apr-12	19-Apr-12	29
43	23-Apr-12	24-Apr-12	21
44	24-Apr-12	25-Apr-12	28
45	25-Apr-12	26-Apr-12	27
46	26-Apr-12	27-Apr-12	30
47	27-Apr-12	28-Apr-12	34
48	8-May-12	9-May-12	22
49	10-May-12	11-May-12	26
50	12-May-12	13-May-12	24
51	14-May-12	15-May-12	26
<b>Total</b>	<b>1398</b>		

#### Batch-wise Details of 2-days Farmer Training at Kamalia Farm

Batch No.	Date in	Date out	No of Farmers
1	8-Mar-12	9-Mar-12	29
2	16-Mar-12	17-Mar-12	26
3	18-Mar-12	19-Mar-12	27
4	20-Mar-12	21-Mar-12	26
5	21-Mar-12	22-Mar-12	30
6	28-Mar-12	29-Mar-12	17

7	29-Mar-12	30-Mar-12	25
8	30-Mar-12	31-Mar-12	28
9	31-Mar-12	1-Apr-12	28
10	2-Apr-12	3-Apr-12	28
11	4-Apr-12	5-Apr-12	31
12	5-Apr-12	6-Apr-12	20
13	10-Apr-12	11-Apr-12	19
14	13-Apr-12	14-Apr-12	29
15	14-Apr-12	16-Apr-12	32
16	16-Apr-12	18-Apr-12	33
17	18-Apr-12	19-Apr-12	30
18	19-Apr-12	20-Apr-12	29
19	24-Apr-12	26-Apr-12	31
20	26-Apr-12	28-Apr-12	32
21	1-May-12	2-May-12	28
22	22-May-12	23-May-12	24
23	23-May-12	23-May-12	27
24	23-May-12	24-May-12	34
25	24-May-12	25-May-12	27
26	25-May-12	26-May-12	25
27	26-May-12	27-May-12	15
28	27-May-12	28-May-12	33
29	28-May-12	29-May-12	28
30	29-May-12	30-May-12	19
31	30-May-12	31-May-12	31
32	31-May-12	1-Jun-12	27
33	5-Jul-12	6-Jul-12	34
34	9-Jul-12	10-Jul-12	28
35	21-Jul-12	23-Jul-12	23
36	24-Jul-12	26-Jul-12	18
37	26-Mar-13	27-Mar-13	22
<b>Total</b>	<b>993</b>		

**Batch-wise Details of 2-days Farmer Training at Khanewal Farm**

Batch No.	Date in	Date out	No of Farmers
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1	8-May-12	9-May-12	25
2	9-May-12	10-May-12	22
3	13-May-12	14-May-12	27
4	15-May-12	16-May-12	25
5	21-May-12	22-May-12	28
6	23-May-12	24-May-12	25
7	24-May-12	25-May-12	27
8	25-May-12	26-May-12	30
9	26-May-12	27-May-12	32
10	27-May-12	28-May-12	33
11	28-May-12	29-May-12	29
12	29-May-12	30-May-12	20
13	30-May-12	31-May-12	27
14	31-May-12	1-Jun-12	31
15	4-Jun-12	6-Jun-12	30
16	7-Jun-12	8-Jun-12	33
17	9-Jun-12	10-Jun-12	32
18	11-Jun-12	12-Jun-12	32
19	20-Jun-12	22-Jun-12	32
20	22-Jun-12	24-Jun-12	25
21	24-Jun-12	26-Jun-12	32
22	27-Jun-12	29-Jun-12	30
23	1-Jul-12	3-Jul-12	33
24	4-Jul-12	5-Jul-12	29
25	7-Jul-12	9-Jul-12	22
<b>Total</b>	<b>711</b>		

**Batch-wise Details of 4-days Farmer Training at Khanewal Farm**

Batch No.	Date in	Date out	No of Farmers
1	18-Apr-12	20-Apr-12	27
2	23-Apr-12	26-Apr-12	14
3	26-Apr-12	29-Apr-12	28
<b>Total</b>			<b>69</b>

**Batch-wise Details of 4-days Farmer Training at Sukheki/Sarsabz Farm**

Batch No.	Date in	Date out	No of Farmers
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1	15-May-12	18-May-12	19
2	22-May-12	25-May-12	22
3	25-May-12	28-May-12	31
4	29-May-12	1-Jun-12	27
5	6-Jun-12	9-Jun-12	25
6	10-Jun-12	13-Jun-12	21
7	14-Jun-12	17-Jun-12	28
8	20-Jun-12	23-Jun-12	30
9	24-Jun-12	27-Jun-12	19
10	2-Jul-12	5-Jul-12	29
11	8-Jul-12	11-Jul-12	25
12	17-Jul-12	20-Jul-12	25
13	24-Jul-12	27-Jul-12	21
<b>Total</b>	<b>322</b>		

**Batch-wise Details of 4-days Farmer Training at Kamalia Farm**

Batch No.	Date in	Date out	No of Farmers
1	5-Jun-12	8-Jun-12	19
2	10-Jun-12	13-Jun-12	24
3	21-Jun-12	24-Jun-12	29
4	25-Jun-12	28-Jun-12	26
<b>Total</b>	<b>98</b>		

**Summary of WLEW Training**

Batch	Training Dates	Combined Data			Zonal Breakup					
		No. of WLEWs	Pass	Fail	Chichawatni			Pir Mahal		
					Total	Pass	Fail	Total	Pass	Fail
<b>Livestock Health Workers</b>										
1	January 1, 2012-February 8, 2012	167	156	11	81	79	2	86	77	9
2	April 1, 2012-May 12, 2012	220	220	0	119	119	0	101	101	0
3	June 1, 2012-June 27, 2012	174	174	0	85	85	0	89	89	0
4	July 2, 2012-July 30, 2012	166	161	5	77	77	0	89	84	5
<b>Livestock Business Entrepreneurs</b>										
1	February 13, 2012-February 24, 2012	433	NA		219	219	0	214	214	0
<b>Total Trained</b>		<b>1160</b>			<b>581</b>			<b>579</b>		

### Annex 3: PMP for Dairy Project<sup>4</sup>

Result	Indicator	Data sources	Baselines and Targets
Impact: Income from dairy activities increased for project-assisted households/trainees	Average increase in the project-assisted household real annual income from dairy activities relative to the baseline	Baseline and follow-up surveys of a random sample of project-assisted farmers	Baseline: TBD Target (for each year): At least 10 percent increase in the household's income from dairy activities.
	Average per month income of WLEWs from livestock services relative to the baseline	Baseline and registers of project-trained WLEWs	Baseline: Zero Target (for each year): Income of at least Rs. 3,000 per month
	Average per month income of AITs from providing AI services relative to the baseline	Baseline and registers of project trained AITs	Baseline: Zero Target (for each year): Income of at least Rs. 3,000 per month
Strategic Objective 1: Livestock productivity improved	Incidence of Hemorrhagic Septicemia and Foot and Mouth Disease in:  i) dairy animals owned by project-assisted households and ii) dairy animals of farmers assisted by WLEW  relative to the baseline	Baseline and follow-up surveys of a random sample of project-assisted farmers. WLEW Records	Baseline: TBD Target (for each year): At least 20 percent reduction in the incidence on average.
	Average monthly (per animal owned by project-assisted household) quantity of milk produced relative to the baseline	Baseline and follow-up surveys of a random sample of project-assisted farmers	Baseline: TBD Target (for each year): At least 10 percent increase in milk yield.
Strategic Objective 1.1. Increased use and availability of livestock services provided by WLEWs			

<sup>4</sup> This PMP shows targets for the calendar years. In the main report, some targets have been adjusted for the reporting period July 2011-July 2012.

Result	Indicator	Data sources	Baselines and Targets
IR 1.1: Use of livestock health and other related services (including entrepreneurial services) through WLEWs increased	Percentage of farmers using services of Women Livestock Extension Workers (WLEWs) relative to the baseline	Two potential sources: 1. Baseline and follow-up surveys of a random sample of farmers 2. WLEW register	Baseline: TBD Targets (for each year): At least ten percent farmers using services of WLEWs.
IR 1.2: Farmers' access to services of self-employed WLEWs increased	Number of villages served by project-trained WLEWs	1. WLEW Register 2. Follow-up surveys	Baseline: Zero Targets: 2012: =784 villages 2013: 784 villages 2014: 196 villages
	Number of project-trained WLEWs providing services as self-employed extension workers	Two potential sources of data: 1. WLEW Register 2. Follow-up surveys	Baseline: Zero Target (for each year): At least 60 percent of the trained WLEWs providing livestock services.
	Number of farmers assisted/provided with services by project-trained WLEWs	WLEW Register	Baseline: Zero Target (for each year): At least 10 farmers per month for each active WLEW.
Output 1.1: 1872 WLEWs trained as animal health workers	Number of women trained	Project training records	Baseline: Zero Targets: 2012: 832 WLEWs 2013: 832 WLEWs 2014: 208 WLEWs
Activity: Train 1872 WLEWs in basic animal health services in different districts of the Punjab			
Output 1.2: 3168 WLEWs trained in livestock management and business	Number of women trained	Project training records	Baseline: Zero Targets: 2012: 1408 WLEWs 2013: 1408 WLEWs 2014: 352 WLEWs
Activity: Train 3168 WLEWs in livestock management and business			
Strategic Objective 1.2: Dairy farm practices improved			
IR 2: Use of best dairy farm practices among project-assisted farmers increased	Percentage of project-assisted farmers using at least three best practices relative to the baseline (disaggregated by farmers/farm managers)	Baseline and follow-up surveys of project-assisted farmers	Baseline: TBD. It can vary with each farmer. Target (for each year): 60 percent farmers adopted three more best practices

Result	Indicator	Data sources	Baselines and Targets
Output 2.1: 9,000 farmers plus 100 farm managers trained in basic farm management skills	Number of farmers/farm managers trained (disaggregated by farmers/farm managers, province)	Project training records	Baseline: Zero Targets: 2011: 64 Farmers 2012: 4,835 Farmers 2013: 3,230 Farmers 2014: 400 Farmers
Activity: Train farmers and farm managers in basic farm management skills			
Output 2.2: At least 2,000 villages reached with mass awareness campaigns	Number of villages reached with TV and/or Radio Sketches	1. Data on media coverage from media research organizations 2. Project activity records	Baseline: Zero Targets (for each year): At least 700 villages
Activity: Conduct mass awareness campaigns through advertisements and documentaries, etc.			
Activity: Organize workshops and farmer day's events			
Strategic Objective 1.3: Dairy cattle breeds improved			
IR 3.1 : Farmers' use of quality AI services from self-employed AITs increased	Number of insemination procedures performed (disaggregated by semen type (local, imported/cross-bred) relative to the baseline	1. Baseline Survey 2. AIT Register 3. Follow-up surveys	Baseline: Zero Target (for each year): At least one insemination per day
IR 3.2: Farmers' access to quality AI services from self-employed AITs increased	Number of villages served by project-trained AITs	1. Baseline Survey 2. AIT Register	Baseline: Zero Targets: 2011: 101 villages 2012: 1,368 villages 2013: 1,440 villages 2014: 720 villages
	% of AIT trainees providing professional services to communities	1. Project follow-up of trained AITs 2. AIT Register	Baseline: Zero Targets (60% of AITs): 2011: 34 AITs 2012: 456 AITs 2013: 480 AITs 2014: 240 AITs
	Ratio of insemination procedures to pregnancy	1. AIT Register 2. Follow-up surveys	Target (for each year): At most 1.7 insemination per pregnancy
Output 3.1: 2,000 AITs trained (with at least 300 from other provinces)	Number of AITs trained	Project training records	Baseline: Zero Targets: 2011: 56 AITs 2012: 760 AITs 2013: 800 AITs 2014: 400 AITs
Activity: Train 2,000 AITs			

Result	Indicator	Data sources	Baselines and Targets
Strategic Objective 1.4: Market linkages improved			
IR 4.1: Farmers' access to milk markets improved	Number of WLEWs operating/ managing project-supported milk collection points in project-assisted communities	Two potential sources: 1. Follow-up surveys 2. WLEWs Registers	Baseline: Zero Targets (for each year): 2012: At least 20 Milk Collection Points
IR 4.2: Farmers' access to dairy productivity-enhancing inputs and services (e.g., feed, nutrients, medicines, AI services) improved	Number of WLEWs offering feed, nutrients, and other inputs for sale to farmers	Two potential sources: 1. Baseline and follow-up surveys WLEWs Registers	Baseline: Zero Targets: 2012: 1408 WLEWs 2013: 1408 WLEWs 2014: 352 WLEWs
	Number of villages served by project-trained AITs offering services to farmers	Two potential sources: 1. Baseline and follow-up surveys AITs Registers	Baseline: Zero Targets: 2011: 101 villages 2012: 1,368 villages 2013: 1,440 villages 2014: 720 villages
IR 4.3: WLEWs and AITs access to private sector input suppliers improved	Percentage of project-trained WLEWs introduced to input suppliers	Two potential sources: 1. Baseline and follow-up surveys WLEWs Registers	Baseline: Zero Targets (for each year): 100%.
	Percentage of project-trained AITs introduced to input suppliers	Two potential sources: 1. Baseline and follow-up surveys AITs Registers	Baseline: Zero Targets (for each year): 100%.
Output 4.1: WLEWs trained in business practices, book-keeping, and milk collection.	Number of WLEWs trained in business practices, book-keeping, and milk collection	Project training records	Baseline: Zero Targets: 2012: 2240 WLEWs 2013: 2240 WLEWs 2014: 560 WLEWs
Output 4.2: Farmers trained in business practices, and book-keeping	Number of project-assisted farmers trained in business practices, and book-keeping	Project training records	Baseline: Zero Targets: 2011: 60 farmers 2012: 4725 farmers 2013: 4305 farmers 2014: 400 farmers
Output 4.3: AITs trained in book-keeping, business management	Number of AITs trained in book-keeping, business management	Project training records	Baseline: Zero Targets: 2011: 56 AITs 2012: 760 AITs 2013: 800 AITs 2014: 400 AITs
Activity: Provide all trained WLEWs established as entrepreneurs with basic business skills, tool kits, and linkages to input suppliers			
Activity: Train WLEWs in business practices, book-keeping, and milk collection.			
Activity: Train AITs in book-keeping and business management			
Activity: Train farmers in business practices, book-keeping			

## **Annex 4: Participant Selection Criteria**

### **Farmer (2 days training)**

- Small farmer having minimum 2 adult dairy animals
- Learning aptitude
- Himself involve in livestock handling
- Aged 25-50 years
- Decision maker in the family for livestock
- Motivated

Group Selection:

- Preferably 15 farmers per village

### **Farmer (4 days training)**

- Dairy farmer having minimum 10 adult dairy animals
- Learning aptitude
- Himself involve in livestock handling
- Aged 25-50 years
- Decision maker in the family about livestock
- Motivated

Group Selection:

- Group of 5 farmers per village

### **Farmer/Farm Manager (1 month training)**

- Social
- Having good communication skills
- Preferred age 25 to 50 years
- Motivated (Candidates for Farm Managers should be interested to work as a Farm Manager as owner or employed persons)

Two groups will be selected.

- Group 1 will contain 300 persons. These persons must have livestock holding of at least 20 adult dairy animals. Education must be at least Matric.
- Group 2 will have 100 people who do not need to have any livestock holding. They must be at least graduate-level.

### **WLEW Selection**

- Social<sup>5</sup>
- Having good communication skills
- Preferably Matriculate<sup>6</sup>
- Aged 20-50 years(preferably Married)
- Preferably involve in livestock handling and management
- Motivated
- Needy

Group Selection:

2 women out of one village who should not be from one family or from the same neighborhood.

### **AIT Selection**

- Needy (Unemployed and not a regular student)
- At least matriculate
- Aged 20-40 years
- Motivated (ready to take it as his career)
- Having good communication skills (should be able to convince farmers).
- 1 technician out of 3-5 villages

Village Selection:

- Non- availability of timely AI services
- Number of adult dairy animals in the target group of villages should be at least 500.

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<sup>5</sup>Information on mobility and social connections will be obtained.

<sup>6</sup> In case of candidates who are not matric passed, candidates with higher qualifications will be preferred over those with lower qualifications.

## **Annex 5: Success Stories**

The following success stories of a few beneficiaries of the dairy project are shared:

1. WLEW Bushra Yasmeen
2. AIT Ali Muhammad
3. AIT Noor-ul-Ameen
4. Dairy farmer Muhammad Zubair
5. WLEW Rahat Parveen



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## SUCCESS STORY

# Empowering Rural Women

**USAID-DRDF Dairy Project helps rural woman become livestock extension worker to provide animal health care and disease prevention services in her village**



*"I participated in the USAID-DRDF Dairy Project training course and I am now able to help nurture the dairy animals of my village. This training course has enabled me to perform basic treatments and preventive disease measures such as the timely vaccination for Foot and Mouth Disease (FMD), a fatal viral disease which causes high fever and blisters in the animal's mouth. It's a plague for dairy farming. I was also provided with a medical kit upon completion of the course and was able to setup a clinic."*

Bushra Yasmeen, Dairy Project trained Women Livestock Extension Worker (WLEW) from Chak no. 769 GB, Pir Mahal Zone

Bushra Yasmeen belongs to village 769 GB in Pir Mahal Zone, where she lives with six children and her husband. She began providing tailoring services in her village in order to make ends meet, but unfortunately that did not provide her with a sustainable income to support her family. Thereafter, an opportunity to meet with the USAID-DRDF Dairy Project team came her way during a community meeting in her village, and she was selected as a trainee for the Women Livestock Extension Worker (WLEW) training course.

The United States Agency for International Development (USAID) and Dairy and Rural Development Foundation (DRDF) through their Dairy Project are providing trainings to women from Punjab's rural communities to become livestock extension workers. The Dairy Project provides a basic 6-weeks long course, and the curriculum and graduation certificates are provided in joint collaboration with the University of Veterinary and Animal Sciences (UVAS).

"Prior to the trainings, I was not earning enough income to support basic necessities for my children and family and could not do much due to lack of education. Now, I have been able to set up a clinic through which I am providing livestock extension services to the dairy farmers in my village," she further explains.

The USAID-DRDF Dairy Project team assisted Bushra Yasmeen in learning about the techniques of animal disease prevention and basic livestock management, which included measures such as timely and scheduled vaccinations against diseases including mastitis and Foot and Mouth Disease (FMD).

"I was provided with a medical support kit after completion of the course for the purpose of providing basic treatment to animals and giving them basic preventive care," says Bushra Yasmeen.

Bushra Yasmeen's new practice has increased her monthly income. "I have earned Rs10, 000 in two months by attending 180 cattle cases in my village," she says.

The USAID-DRDF Dairy Project team aims to continue providing support and guidance for women to be able to provide livestock extension support, and equip them with the knowledge, skills and tools to provide much-needed animal health care in their villages. It is expected that as a result of such activities, a total of 1500 villages will have improved animal health care services.



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## SUCCESS STORY

# Embarking on Entrepreneurship

**Dairy Project trains unemployed villagers to become Artificial Insemination Technicians (AITs) for dairy breed improvement and to kick start their businesses in Punjab**



*"I participated in the USAID-DRDF Dairy Project's AIT training course and I am now able to help improve cow/buffalo breeds in my village and surrounding areas. This training course has enabled me to perform pregnancy tests and artificial insemination, for breed improvement, which translates into better incomes for me and my family and high profitability for dairy farmers. I was also provided with a motorbike, upon having my work evaluated by the Dairy Project team. Now, travelling distances and attending urgent AI cases from afar is not a problem. Thank you Dairy Project!"*

Unemployed in 1998, Ali Muhammad left his village and home in Shorkot, Punjab to relocate to Dubai to work as an electrician and earn a high income for his family. But Muhammad later realized that he could not survive without his family of six for very long, and decided to return to Pakistan in 2006. "Unfortunately, I was unemployed here for another five years until I met the USAID-DRDF Dairy Project team, which introduced me to Artificial Insemination techniques for dairy breed improvement, and urged me to participate in the AI training being held in Burj Attari, Sheikhpura, Punjab. This is how my life and income improved in Pakistan," he explains.

It all began in October 2011, when the Dairy Project team arrived in Shorkot, Punjab and introduced Muhammad to the AI trainings being conducted by the project. "Initially, I was scared and apprehensive," he says. "But it was my good fortune that I decided to go for it," he states. Thereafter, Dairy Project's team of master trainers helped Muhammad learn about Rod Passing and conducting pregnancy tests for cows/buffaloes. "An accurate diagnosis of pregnancy is crucial to maintaining the optimal reproductive health of the animal, and hence beneficial for the profitability of dairy farmers. If an animal is not pregnant after two inseminations, we know that there is something wrong with the insemination procedure or reproductive health of the animal," he explains. "Rod passing is a technique through which we can artificially inseminate the animal, by using a gun to inject semen in the reproductive tract of cows/buffaloes."

"After the training, I passed the exam and Dairy Project provided me with a kit, which included nitrogen gas for safe storage of semen and other equipment," Muhammad says. During an induction meeting in his district, farmers were introduced to Muhammad's work and the breeding services he would be able to provide to them. "In November 2011, I began work and since then, have attended 509 artificial insemination cases. My average income is 12,000 rupees per month now," he says.

"Insemination services were not available timely in my district and now farmers are also experiencing a transformation in their traditional mindset."

The USAID-DRDF Dairy Project team then conducted a performance evaluation survey, which, by sample-based pregnancy tests, revealed that through artificial insemination, Muhammad has impregnated cows at a 100 percent success rate. Due to this high performance, Muhammad was awarded a motorbike which further assisted in expanding the scale of his AI services, even outside his village.

"Previously, I had to run after my friends to borrow a bike to attend farmers' call for artificial insemination. Sometimes, I would end up missing artificial insemination cases, which have to be performed while the animal is on heat. Now the situation is much better as I can easily travel long distances for artificial insemination," Muhammad says.



## SUCCESS STORY

# Improving Breed For Better Yield

**USAID helps artificial insemination technicians provide better dairy breeding services for increased milk production and incomes**



*USAID-DRDF Dairy Project's interventions for sustainable economic growth of Pakistan's livestock sector (especially dairy sector) will improve the livelihoods of rural communities through capacity building, and provision of quality and timely extension services.*

The livestock sub-sector's share in Pakistan's agriculture economy is around 55 percent. Livestock has tremendous potential for growth and is a major source of living for millions of people in rural areas. However, poor genetics is a vital reason of low milk yield per dairy animal. In order to improve milk productivity, there is an immense need to introduce cross-breeding through Artificial Insemination (AI). This can help increase a dairy animal's milk yield by 40 to 50 percent.

U.S. Agency for International Development (USAID), and Dairy and Rural Development Foundation (DRDF), through their Dairy Project, are providing trainings and equipment to AI workers with the aim of establishing them as self-employed entrepreneurs. The one-month training program for Artificial Insemination Technicians (AITs) includes a blend of theory and practical demonstrations.

As of June 2012, the project has supported 291 AITs mostly from South Punjab, who have received trainings and AI kits. The kits include AI container, 50 semen shots (out of which 25 are of imported breed), insemination guns, animal ear tags, liquid nitrogen gas for transporting and storing semen, and other supportive equipment including thermometer, apron, and gloves. The use of kits will help the technicians' jump-start their businesses and improve earnings. The project-trained AITs are now providing AI services to dairy farmers for breed improvement and are earning PKR 4000 per month on average.

USAID-DRDF Dairy Project is providing follow-up support to the technicians through technical assistance. The project is establishing a network to ensure that the technicians are able to maintain continuous access to liquid nitrogen and semen. "Cross-breeding and increased availability of high quality semen will lead to genetically improved, more productive animal stock," said Noor-ul-Ameen, a project assisted artificial insemination technician providing services in Jhang District. "The project's assistance package for artificial insemination technicians will eventually provide us with better incomes to support our families."



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## SUCCESS STORY

# Dairy Farmer Brings Positive Change

**USAID helps dairy farmer adopt best dairy farming practices for increased milk production and income**



Photo by USAID-DRDF Dairy Project

*“Becoming a part of the USAID-DRDF Dairy Project has helped me in ways more than one. I see myself as a successful farmer who is able to not only increase milk yield, but also develop a positive vision towards best dairy farming practices including silage-making. I have now successfully cultivated one acre of maize for silage.” – Muhammad Zubair, dairy farmer from Tehsil Kamalia, Toba Tek Singh*

Dairy farming entrepreneurship can be a daunting initiative for most. For Muhammad Zubair from Tehsil Kamalia, Toba Tek Singh, growing his dairy farming business deemed impossible until he took part in the USAID-DRDF Dairy Project’s training program.

U.S. Agency for International Development (USAID), and Dairy and Rural Development Foundation (DRDF), through their Dairy Project, are providing trainings and support kits to dairy farmers to foster sustainable increase in dairy and livestock productivity through adoption of best dairy farming practices. As of June 2012, the project has trained 3008 smallholder dairy farmers from Punjab.

“Prior to enrollment in the USAID-funded Dairy Project’s training program, my dairy business earnings were very low,” recalls Muhammad Zubair. “My perspective towards the animals and their care was very nonchalant and substandard, now that I look back,” he says. Muhammad Zubair would usually keep his animals tied up, and instead of allowing free access to water, they would be given water only twice a day.

In terms of health and hygiene, no vaccination was given to the animals. “I did not know that my animals had to be dewormed and I had never heard of teat dipping,” explains the now-enlightened farmer. Muhammad Zubair was not aware of the benefits of deworming, which protects dairy animals against intestinal parasites. “I didn’t know that teat dipping is vital for mastitis control in my animals,” he says. Due to insignificant milk production, Muhammad Zubair did not practice any record-keeping either.

With his involvement in the USAID-DRDF Dairy Project trainings, Muhammad Zubair’s farming techniques have improved drastically. “I realized the importance of animal feeding and with assistance from the Dairy Project’s follow up teams; I was able to cultivate maize for silage from my own resources.” By making silage, Muhammad Zubair will be able to bridge the gap for green fodder shortage period, thereby, he will be able to keep his animals well-fed and his daily milk output will remain high.

After adopting these best farming practices, Muhammad Zubair’s dairy milk production has increased by two liters per day, which is an increase of Rs 7000 monthly income from three lactating animals. Muhammad Zubair has gone from a farmer, who was barely able to make ends meet, to one with a secure future made possible with assistance and guidance from USAID and DRDF.



## SUCCESS STORY

# Rural Woman Takes Charge

**USAID helps 21-year old Rahat become a *Vanda* seller and support her family of 14**



***“I participated in the USAID-DRDF Dairy Project WLEW training course and it has altered my vision in life. I have become a successful profiteering *Vanda*-seller in my district. USAID’s Dairy Project invested in me, and I am extremely thankful to the team.”***

-Rahat Parveen, Dairy Project trained Woman Livestock Extension Worker (WLEW) from Tehsil Kamalia, District Toba Tek Singh

21-year old Rahat Parveen’s life appeared to be like a dead-end, after she was forbidden to return to school two years ago, due to financial constraints.

“We’re a big family of 14! It never occurred to me that my family would have to struggle this much for barely making ends meet, with my father being ill for the past many years; my brothers are younger and two of my married sisters separated from their husbands and returned home. There was little or no source of income.”

The United States Agency for International Development (USAID) and Dairy and Rural Development Foundation (DRDF) through their Dairy Project are providing trainings to women from Punjab’s rural communities to become livestock extension workers. The Dairy Project provides a basic one month long course, and the curriculum and graduation certificates are provided in joint collaboration with the University of Veterinary and Animal Sciences (UVAS).

In December 2011, Rahat had the opportunity to meet a Dairy Project social mobilizer and was introduced to the project. On January 2, 2012, a keen Rahat began the one month training program and passed her UVAS exam successfully. “During the training, I learnt various new techniques, including controlling dairy animals through the crisscross method, preventing a fatal respiratory disease such as Hemorrhagic Septicemia (HS), animal nutrition and feeding, and free access to water for animals. Towards the end, I was selected by the project to sell *Vanda*, a top quality feed which contains the vital ingredients necessary for the well-being of animals, especially those which are young and producing milk,” she explains.

In April 2012, Rahat was given 30 free-of-cost *Vanda* bags by the Dairy Project, for sale in her village. She marketed her product through flyers, and successfully sold the 30 bags for PKR1000 each and earned an income of PKR 30,000. In July 2012, she bought 12 *Vanda* bags for Rs 900 each. She sold 10 bags for Rs 1000 each, making an additional profit of PKR 1000. She sells the *Vanda* bags with her brother’s support, through placing the bags at his small general store in the village.

In addition, Dairy Project has given Rahat a cellular phone, so she can liaise with *Vanda* suppliers in the market. With the profit she earned, she has brought back the tradition of two proper meals being served at home and has been able to regularly purchase medicines for her ill father. More importantly, the family owns a very small piece of land, and she has bought some water for her crops. Once the harvest reaps an income, she will reinvest it into the *Vanda* business and purchase more bags to sell.

“The USAID Dairy Project has not just made me a seller of *Vanda* bags; it has opened my eyes towards dairy farming. With this income, I’m also going to arrange for free access to water for my three dairy animals,” she says on a positive note.