



OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/PAKISTAN'S SMALLHOLDER DAIRY PROJECT

AUDIT REPORT NO. G-391-16-002-P
OCTOBER 29, 2015

ISLAMABAD, PAKISTAN



Office of Inspector General

October 29, 2015

MEMORANDUM

TO: USAID/Pakistan Mission Director, John Groake

FROM: Office of Inspector General/Pakistan Director, Van Nguyen /s/

SUBJECT: Audit of USAID/Pakistan's Smallholder Dairy Project
(Report No. G-391-16-002-P)

This memorandum transmits our final report on the subject audit. In finalizing the audit report, we considered your comments on the draft and included them in their entirety, excluding attachments, in Appendix II.

The audit report contains two recommendations to assist the mission in improving various aspects of the program. After reviewing information provided in response to the draft report, we acknowledge that the mission has taken final action on both recommendations.

Thank you for the cooperation and assistance extended to the audit team during this audit.

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SUMMARY OF RESULTS

Domestic dairy farming in Pakistan involves an estimated 35 million people, most living in Punjab Province. The sector has great potential for growth, but outdated, inadequate management practices limit production and income.¹

To improve productivity and livelihoods of dairy farmers in rural Punjab, on January 28, 2011, USAID signed a 3-year, \$14 million cooperative agreement with the Dairy and Rural Development Foundation (DRDF) to implement the Smallholder Dairy Project. DRDF is a nonprofit organization based in Lahore that provides information on the agrolivestock sector, training on artificial insemination to increase the production of milk, and training for farmers on best practices.

The project aims to foster a sustainable increase in dairy and livestock productivity through the adoption of best dairy farming practices, breed improvement, availability of timely extension services, and promotion of the livestock business. The initial focus was on training three beneficiary groups and meeting these training goals:

- *Dairy farmers.* Persuade 9,000 dairy farmers to adopt the best dairy-farm management techniques, including breed improvement.
- *Artificial insemination workers.* Help 2,000 people, most of them unemployed, open businesses as inseminators.
- *Women livestock extension workers (WLEWs).*² Help 5,000 women, most of them unemployed, become self-employed educating community members about livestock.

In October 2014, the mission extended the agreement for 2 years and increased funding by \$7 million. During Years 4 and 5, the project was working to establish 100 model farms in 100 villages in Punjab Province. With these model farms, the project sought to train 40,000 dairy farmers, 1,000 artificial insemination workers, and 1,000 WLEWs, and to retrain 1,000 WLEWs from the first phase of the project who did not receive advanced husbandry and business development skills training, areas added after the first 3 years. As of December 31, 2014, USAID/Pakistan had obligated \$20.9 million and disbursed \$14.1 million under the project.³

USAID's Office of Inspector General (OIG) in Pakistan conducted this audit to determine whether the Smallholder Dairy Project was improving the skills of dairy farmers, artificial insemination workers, and livestock workers to increase incomes.

¹ USAID-DRDF Dairy Project Year 1 Annual Implementation Plan, July 15, 2011, to July 14, 2012.

² WLEWs provide dairy farmers with livestock services such as basic animal health management, diagnosis of common diseases, administration of various basic medicines, and animal nutrition.

³ These amounts come from the Agency's financial systems. On November 17, 2014, OIG issued *Audit of USAID's Financial Statements for Fiscal Years 2014 and 2013*, Report Number 0-000-15-001-C, disclaiming an opinion because of material unsupported adjustments USAID made to reconcile its general and subsidiary ledgers. We did not perform any additional tests during this audit/review/survey/assessment to verify the accuracy of the reported amounts. In FY 2015 OIG anticipates testing USAID's adjustments to determine if they were accurate and appropriate. USAID intends to provide explanations and other support to demonstrate the adjustments' validity.

The audit found the following:

- The project was improving the incomes of dairy farmers and artificial insemination workers (page 3). As of September 30, 2014, the project had trained 9,285 dairy farmers, 2,032 artificial insemination workers, and 5,015 WLEWs, surpassing the targets for each beneficiary group. The project increased the monthly incomes of participating dairy farmers by 18 percent and incomes of artificial insemination workers by 227 percent.
- The project did not increase the average income of WLEWs (page 4). Most of the women trained earned only 1,144 rupees (or approximately \$11) per month, short of the expected 3,000 rupees (approximately \$30) per month. The implementer and the women themselves attributed the shortfall to social and cultural barriers, and exploitation by farmers who sometimes refuse to pay them for services.

To address the disappointing results for WLEWs, we recommend that USAID/Pakistan:

1. Integrate gender sensitivity into project training to reduce cultural barriers limiting women's economic opportunities in dairy farming and other sectors (page 5).
2. Work with the implementer to extend the period of follow-up support to women extension workers (page 5).

Detailed findings follow. The audit's scope and methodology appear in Appendix I. Management comments are included in Appendix II, and our evaluation of them is on page 6.

AUDIT FINDINGS

Project Improved the Incomes of Dairy Farmers and Artificial Insemination Workers

According to the agreement, the project's goal was to train 9,000 dairy farmers and 2,000 artificial insemination workers. For dairy farmers, training on best farm management techniques would provide them with the tools to increase household income. Newly trained artificial insemination workers, whose selection was partially based on being unemployed, would be able to establish themselves as entrepreneurs. As for earnings, the project's goal was to increase the income of dairy farmers by 10 percent, and achieve a target income of 3,000 Pakistani rupees (approximately \$30) per month for artificial insemination workers. Results appear below.

Project's Performance on Training and Income Goals (unaudited)

Group	Training Target	Result	% of Target	Income Target	Result	% of Target
Farmers	9,000	9,285	103	Increase by 10%	Increased by 18%	180
Artificial Insemination Workers	2,000	2,032	102	\$30 per month	\$68 per month	227
Female extension workers	5,000	5,015	100	\$30 per month	\$11 per month	37

Dairy farmers increased their income by adopting at least three of the following practices taught under the project. They included:

- Providing 24-hour access to food and water to their animals.
- Building animal shelters from the sun and heat.
- Deworming and giving inoculations.
- Observing basic hygiene for milking.
- Preparing and storing fodder to use when no feed is available.

After completing training, artificial insemination workers received kits to help start their businesses. Kits contained items such as an insemination gun, semen doses, nitrogen gas cylinder, liquid nitrogen gas, gloves, and thermometers. Workers who went on to meet performance criteria received a motorbike, which allowed them to serve more customers.⁴

⁴ New artificial insemination workers were expected to perform a minimum of 50 inseminations within the first 90 days of receiving the starter kit and achieve a minimum conception rate of 40 percent.

Besides practical animal husbandry techniques, start-up supplies, and performance incentives, two other factors contributed to the project's success: the mission's involvement with DRDF and the help DRDF received from Nestle Pakistan, Ltd. The mission's involvement started with a preaward assessment of DRDF, outlining its strengths and weaknesses. When the mission concluded from this assessment that DRDF was a high-risk recipient, the mission required it to strengthen management capacity and internal controls. This included establishing a conflict-of-interest policy; forming an audit committee; and developing accounting, procurement, and human resources policies. These measures would provide reasonable assurance that DRDF, as a first-time recipient of U.S. Government funding, could adequately monitor and efficiently use project resources. Due to the Office of Acquisition and Assistance's effective monitoring of the implementation of these measures, by January 2013 the mission was able to revise DRDF's status to low risk. Additionally, the mission's agreement officer's representative continued to monitor the daily activities of the program.

Nestle's support was also important. It contributed eight full-time key staff members and allowed the project to use two of its model dairy farms to train dairy farmers. Staff included a project director, financial controller, general manager for field operations, and human resources manager. According to the agreement, the value of this third-party support during the project's first 3 years was estimated at \$3.4 million.

These factors contributed to the overall success of assistance to the dairy farmers and artificial insemination workers. Participants gained the knowledge and skills necessary to continue to grow their businesses, thus providing increased incomes for themselves and their families.

Project Did Not Increase the Average Income of Women Livestock Extension Workers

WLEWs are an integral component of the project. Of the 16,000 people trained under the project, 5,000 (or 31 percent) were WLEWs. The objective of training women was to increase the availability of extension services and enhance rural women's employment and income opportunities.

Extension training lasted a month and covered the following topics: management of basic animal health; diagnosis of common livestock diseases; administration of basic medicines; nutrition; and basic bookkeeping and negotiation skills. At the end of training, participants took a written and oral exam administered by the University of Veterinary and Animal Sciences of Lahore. Those who passed got a starter kit containing the aforementioned medical supplies, a mobile phone, cattle feed bags, a lab coat, a notebook, and a handbag.

In the project's first 3 years, it achieved its training target of 5,000 WLEWs but not its income target. The average income of WLEWs fell short of the expected 3,000 rupees (approximately \$30) per month. Most women earned only 1,144 rupees (or approximately \$11) per month. Although the training provided the skills necessary to perform livestock extension services, the women were unable to translate them into increased income.

According to the implementer and the WLEWs themselves, their limited achievement resulted from social and cultural barriers:

- Women need the approval of male family members to work outside the home.
- Women often lack their own transportation, limiting their ability to reach clients and grow their customer base.
- Some farmers exploit them. Some farmers did not believe women were physically capable of doing the job and would refuse their services. Others would refuse to pay for services after they were rendered.

These cultural challenges limited the success of the project.

Furthermore, follow-up support for extension workers didn't last long enough. The project gave the women follow-up technical support for only 1 month after training. That was not enough time to reinforce the skills they'd already learned, build their experience running and marketing their businesses, or help them promote their services among community farmers.

Continued low income could discourage female workers. If they dropped out, the project would not achieve meaningful results in making extension services more available, and the time and funding invested would be wasted. Sensitizing dairy farmers and artificial insemination workers to female equality and empowerment could help overcome cultural challenges and increase the women's economic opportunities.

With the 2-year extension, the project was working to train an additional 40,000 dairy farmers through the establishment of 100 model farms in 100 villages. The success of this effort would hugely increase demand for extension services. To help the project take advantage of this demand and achieve its expected results, we make the following recommendations.

Recommendation 1. We recommend that USAID/Pakistan integrate gender sensitivity (women equality and empowerment) into project training to provide awareness to all dairy farmers, artificial insemination workers, and women livestock extension workers to improve women's access to economic opportunities.

Recommendation 2. We recommend that USAID/Pakistan work with Dairy and Rural Development Foundation to provide additional support to the women livestock extension workers by extending the follow-up timeframe.

EVALUATION OF MANAGEMENT COMMENTS

In its comments, USAID/Pakistan agreed with the audit report's two recommendations and has taken final action on both. Below is our evaluation.

Recommendation 1. USAID/Pakistan agreed and in April 2015 provided training to all project management staff and trainers on gender sensitivity. The mission will incorporate gender sensitivity issues into all technical trainings given to dairy farmers, artificial insemination workers, and WLEWs. We acknowledge management's decision and final action on Recommendation 1.

Recommendation 2. USAID/Pakistan agreed and updated the work plan for the project, extending follow-up assistance for women livestock extension workers. The plan includes providing refresher trainings, making efforts to strengthen the workers' supply network, and providing workers with mobile phones. We acknowledge management's decision and final action on Recommendation 2.

SCOPE AND METHODOLOGY

Scope

OIG/Pakistan conducted this performance audit in accordance with generally accepted government auditing standards. They require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe the evidence obtained provides that reasonable basis.

The objective of this audit was to determine whether the Smallholder Dairy Project was improving the skills of dairy farmers, artificial insemination workers, and livestock workers to increase their incomes.

In January 2011, USAID signed a 3-year, \$14 million cooperative agreement with DRDF to implement the Smallholder Dairy Project. In October 2014, the agreement was extended for 2 years and funding increased by \$7 million. As of December 31, 2014, USAID/Pakistan had obligated \$20.9 million and disbursed \$14.1 million under the project. The disbursed amount represents the amount tested during this performance audit.

The audit covered the period from project inception, January 28, 2011, to December 31, 2014. We conducted audit fieldwork from September 11, 2014, to April 28, 2015, at USAID/Pakistan and at the office of DRDF.⁵ We also visited program beneficiaries in six districts in Punjab Province.

In planning and performing the audit, the audit team assessed the significant internal controls used by the mission to manage the project and ensure adequate oversight of activities. Specifically, we examined and evaluated internal control documentation prepared by the mission, the implementer, Nestle Pakistan, and independent accounting firms, including the following:

- Cooperative agreement and subsequent modifications between DRDF and USAID
- USAID/Pakistan approved vouchers
- USAID/Pakistan portfolio reviews
- Agreement between Nestle Pakistan and DRDF
- Financial audit of DRDF performed by the accounting firm Crowe Horwath
- DRDF policies and procedures manuals
- DRDF implementation plans and quarterly reports
- Approved monitoring and evaluation plan
- USAID/Pakistan's annual self-assessment of management controls, done to comply with the Federal Managers' Financial Integrity Act of 1982, for 2011, 2012, and 2013

We also reviewed the mission's pre- and post-award conditions, outlined in the cooperative agreement, and verified the implementer's compliance with them.

⁵ To address other OIG priorities, we suspended audit fieldwork from November 24, 2014, through February 19, 2015.

Methodology

To answer the audit objective, we reviewed the cooperative agreement between USAID/Pakistan and DRDF, work plans, monthly and quarterly progress reports, applicable regulations (such as USAID's Automated Directives System and the Code of Federal Regulations), and related OIG audit reports. We also conducted interviews in Islamabad with officials from the mission, and in Lahore with DRDF representatives. We visited a Nestle model farm used by DRDF and beneficiaries, and interviewed beneficiaries from all three training groups—dairy farmers (51), artificial insemination workers (59), and women livestock extension workers (45). Through these interviews and documentation reviews, we obtained an understanding of (1) the project's goals, (2) the project's design and planning process, (3) how the mission monitors activities, (4) accomplishments to date, and (5) whether the mission, implementing partner, or beneficiaries were aware of any allegations of fraud, other potential illegal acts, or noncompliance with laws and regulations.

To answer the audit objective, we relied extensively on the computer-processed data contained in Excel maintained by DRDF. We assessed the reliability of this data together with relevant general and application controls of information technology systems and found them adequate. We also conducted sufficient tests of the data. These tests and assessments led us to conclude the data are sufficiently reliable to be used in answering the audit objective.

Our testing included training and survey data.⁶ For the training data, we judgmentally selected training classes that took place between April and June 2013. For dairy farmers, we reviewed attendance sheets. For artificial insemination workers and women livestock extension workers, we reviewed their exam certificates.

For survey data, we looked at data gathered between January and March 2014. We selected five indicators (three pertaining to dairy farmers, one to artificial insemination workers, and one to WLEWs) for testing:

1. *Average increase in the project-assisted household's real annual income from dairy activities, relative to the baseline.*
2. *Incidence of hemorrhagic septicemia and foot and mouth disease.*
3. *Percentage of farmers using the services of WLEWs, relative to the baseline.*
4. *Average monthly income of artificial insemination workers from providing artificial insemination services, relative to the baseline.*
5. *Average monthly income of WLEWs from livestock services relative to the baseline.*

Regarding the first indicator tested, the audit did not link the increase in farmer income with an increase in milk yield. Many factors contributed to the increase in income, such as a decrease in expenses (e.g., from less spending on medical services for cattle) or an increase in the market price of milk or milk products. Therefore, an increase in farmer income does not necessarily correlate with increased milk yield.

⁶ To monitor and report quarterly project results, DRDF continuously conducted surveys of sampled beneficiaries.

We validated indicator performance results against data maintained by DRDF in its monitoring and evaluation system and source documentation. We found no discrepancies.

The audit team also conducted a 3-day site visit to the districts of Lahore, Okara, Sahiwal, Lodhran, Multan, and Vehari, where we met with dairy farmer, artificial insemination, and WLEW trainees. During those meetings, we gained an understanding of the training they received, the equipment provided, and their general perception of the project. We chose the sites to visit based on their accessibility and the security situation in Pakistan.

Our sample selections were judgmental. Therefore, the results are limited to the items tested and cannot be projected to the entire audit population.

MANAGEMENT COMMENTS



USAID
FROM THE AMERICAN PEOPLE

PAKISTAN

MEMORANDUM

Date	October 27, 2015
To	Tuyvan Nguyen - Director OIG/Pakistan
From	John Groarke - Mission Director USAID/Pakistan
Subject	Management Decision on the Performance Audit of USAID/Pakistan's Small Holder Dairy Project
Reference	Draft Report dated September 03, 2015

The USAID/Pakistan Mission would like to thank the OIG/Pakistan for providing the Mission the opportunity to review the draft performance audit report of the Small Holders Dairy Project. Please find below our management comments on the recommendations included in the referenced audit report.

Recommendation No. 1 We recommend that USAID/Pakistan integrate gender sensitivity (women equality and empowerment) into project training to provide awareness to all dairy farmers, artificial insemination workers, and women livestock extension workers to improve women's access to economic opportunities.

Management Comments

The Mission agrees with the recommendation. The USAID/Pakistan's Smallholder Dairy Project has already conducted a three-day training course for all of its project management staff and master trainers on gender sensitivity. This training was conducted in April 2015 and it covered all aspects of gender equality and female empowerment (Please see attached Annex- A for the course content and the attendance list for this training). This gender sensitivity training module will be incorporated into all technical trainings planned to be given to the dairy farmers, artificial insemination workers, and Women Livestock Extension Workers (WLEW). The module will be delivered by the master trainers, all of whom have themselves received the training.

Based on the above, we report that the final action has already been taken and request closure of this recommendation upon issuance of the final audit report.

Recommendation No. 2 We recommend that USAID/Pakistan work with Dairy and Rural Development Foundation to provide additional support to the women livestock extension workers by extending the follow-up timeframe.

Management Comments

The Mission agrees with the recommendation. In the extension phase of the project, Dairy and Rural Development Foundation (DRDF) is providing refresher trainings to already trained WLEWs to help them increase their earnings. This is an extension beyond the previous follow-up timeframe. The project is also making efforts to strengthen the WLEW supply network in order to further augment the earnings of all WLEWs. This is being done by extending the existing supply line of DRFD, which is being used for Artificial Insemination Technicians (AITs), to the WLEWs in order for them to provide vaccinations and other veterinary items to their clients. All WLEWs (past trainees included) are now provided with mobile phones as part of the WLEW kit, to help establish efficient communication channels with their vendors and customers. The project is also now conducting regular meetings between vendors and WLEWs to assist the procurement processes.

Furthermore, advanced groups of WLEWs are being formed to act as “area service-hubs” for other WLEWs. The main purpose of clustering is to expand their businesses and provide them with additional skills; such as milk collection, calf fattening, etc. The project is also making linkages with the private sector and other USAID projects which are working on livestock issues to use the trained WLEWs as a resource for their interventions. The project is collaborating with the USAID Agriculture Market Development project to assist in the enumeration process of livestock in each WLEW area. This enumeration will be done by the WLEWs who will register all the animals in their vicinity and help private sector buyers find the sellers. The WLEWs will get commissions for all the completed transactions.

These actions by DRDF in the extension phase of the project represent additional follow-up and support for the WLEWs which are expected to result in increased incomes for them. The updated work plan for the project that reflects the interventions detailed above is enclosed as Annex-B. Specific references are made in the section captioned Component 4 – under sub heading Training and Support for WLEWs on page #19. The discussion can further be tracked in the section for Market Linkages on page #19-20. The section on Sustainability Plan of Dairy Project Beneficiaries on page #31, point- 4 and on page #32, point C reiterates the same approach. More details regarding the follow-up mechanism for WLEWs can be found in the Standard Operating Procedures for the project attached as Annex-C. Please refer to narrative on page #27 under the section for Follow-up Meetings and on page #29 under Refresher/Advance Training.

Based on the above, we report that the final action has already been taken and request closure of this recommendation upon issuance of the final audit report.

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Audit Task No. GG100413