USAID FROM THE AMERICAN PEOPLE	**Rwanda Dairy Competitiveness Program II**	LAND O'LAKES, INC. INTERNATIONAL DEVELOPMENT Innovative Solutions for Global Prosperity

RWANDA DAIRY COMPETITIVENESS PROGRAM II

Quarterly Report

January 1 – March 31, 2015

CA# USAID-696-A-12-00002

Submitted to

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QUARTERLY REPORT

January 1, 2015 – March 31, 2015

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Acronyms and Abbreviations

ABS	African Breeders Services, Total Cattle Management Limited
AI	Artificial Insemination
BDS	Business Development Services
BFS	Bureau of Food Security
COMESA	Common Market for Eastern and Southern Africa
COP	Chief of Party
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DPPD	Dairy Public Private Dialogue
DSWG	Dairy Sector Working Group
DQAL	Dairy Quality Assessment Laboratory
EADD	East Africa Dairy Development project
EDPRS	Economic Development and Poverty Reduction Strategy
EMMP	Environmental Mitigation and Monitoring Plan
ESADA	East and Southern Africa Dairy Association
IEE	Initial Environmental Examination
INGO	International Non-Governmental Organization
GoR	Government of Rwanda
MCC	Milk Collection Center
MINAGRI	Ministry of Agriculture and Animal Resources
MINECOFIN	Ministry of Economic Planning and Finance
MINEDUC	Ministry of Education
MINICOM	Ministry of Trade and Industry
MINALOC	Ministry of Local Government
MINISANTE	Ministry of Health
MS – DSWG's	Milk Shed – Dairy Sector Working Groups
MSME	Micro, Small and Medium Enterprise
NDS	National Dairy Strategy
PLWHA	People Living with HIV and AIDS
PMP	Performance Management Plan
PSF	Private Sector Federation
PSTA III	Strategic Plan for the Transformation of Agriculture in Rwanda – Phase
RAB	Rwanda Agriculture Board
RALIS	Rwanda Agriculture and Livestock Inspection Services
RARDA	Rwanda Animal Resources Development Authority
RBS	Rwanda Bureau of Standards
RDB	Rwanda Development Board
RDCP II	Rwanda Dairy Competitiveness Program II
RMSA	Rwanda Milk Sellers Association
RNDB	Rwanda National Dairy Board
SOQ	Seal of Quality
SP	Service Providers
TOT	Training of Trainers
UCD	University of California – Davis

Introduction and Highlights

This is the quarterly report for the period January 1 to March 31 2015. USAID's Rwanda Dairy Competitiveness Program II (RDCP II) project was designed to reduce poverty through expanded marketing of quality milk that generates income and employment, and improves nutrition of rural households. RDCP II aims to achieve this by linking existing and new smallholder dairy producers to expanding market demand driven by improved quality, reduced transaction costs and increased investment all along the dairy value chain.

Highlights for the past quarter ending March 2015 include the following:

RAB and UR co-host Rwanda's First National Mastitis Workshop

RDCP II facilitated Rwanda Agricultural Board and University of Rwanda to co-host Rwanda's first national mastitis workshop in Kigali on February 24th -26th. The theme of the event was the role of public and private sector institutions in building a roadmap for mastitis control and prevention. Day one was a scientific session dedicated to the presentation of academic papers on mastitis related topics, day two focused on policy and economic impact of mastitis on the dairy sector in Rwanda with day three concluding on laying a strategy for completion of a roadmap for mastitis control as a national agricultural priority. UC Davis presented the findings of the DDM program during the workshop emphasizing the importance of the role of the veterinary sector both public and private.

Figure 1: Participants at Rwanda 1st National Mastitis Workshop Kigali Feb 24-26, 2015

Best Practices materials distributed across 17 milksheds

During this period, RDCP II team distributed the Best Practises material across all seventeen milk sheds. The posters produced by CC are now evident in many MCC's across the country and serve as daily reminder to all those handling milk on the best practises that should be followed. In addition posters on the same quality theme have been placed in the majority of Kigali's Milk Zones which can be viewed by both the public and milk zone operators alike as milk is purchased.

Figure 2: Dairy Best Practices posters have been distributed to MCC's across Rwanda's four milksheds

RDCP II Mid Term Evaluation Concluded

Figure 3: The midterm evaluation team sharing findings

RDCP II underwent a mid term performance evaluation during February and March. Copy of draft report feedback was received at end of March with very positive feedback both from the mid term evaluation team and USAID staff member from the Bureau of Food Security office (BFS) in Washington who visited RDCP II to coincide with review team. As quoted in the Mid Term Evaluation "The RDCP II program overall has had an extremely positive impact on the dairy industry in Rwanda. The program can be credited with improving the availability and quality of milk as well as the improving the financial viability of dairy producing operations throughout the agricultural value chain. The relationships that the program has formed with various governmental and private sector actors should serve as a model for similar programs and have allowed the formation of a common sense of purpose and pride throughout the industry as should the dedication shown to inclusion of women into the program.

Value Addition training completed - Butter

Figure 3: First Butter produced at Butter making training Feb 20th Rubavu district

RDCP II facilitated Rwanda's first butter making training during February. Training was attended by three processors and was held at Fromagie La Reine premises in Rubavu. Currently all butter consumed in Rwanda is imported. This provides an import substitution opportunity for Rwanda's dairy processors to replace expensive imported product with locally produced butter. During the quarter one processor has commenced daily delivery of butter to Kigali based bakeries supplying approximately 100 kg per week and a second has purchased butter making equipment to commence production during the next quarter.

Blessed Dairies secures HACCP certification and subsequently a supply contract to Rwanda Air.

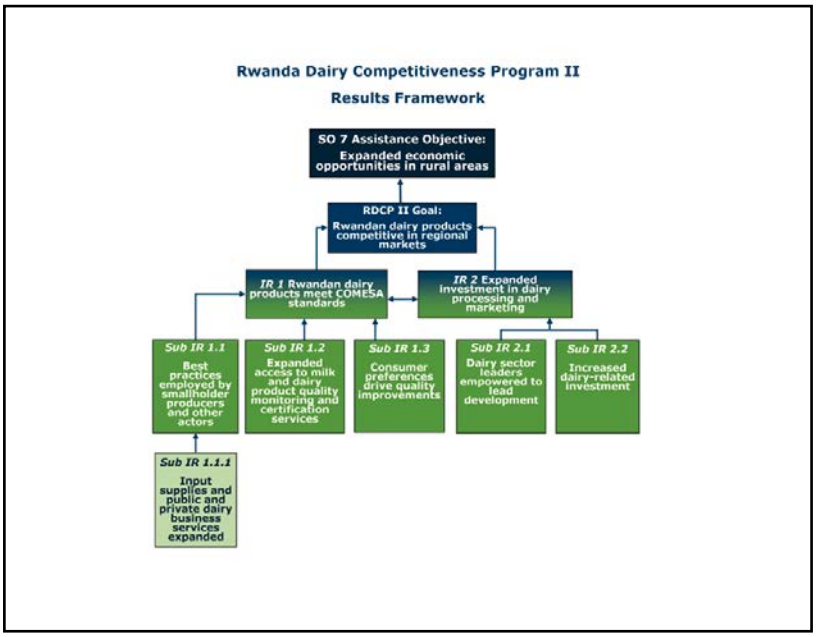
Figure 5: Blessed dairy yoghurt on in flight service trays on outbound Rwandair flights Mar 2015

Blessed dairies recently received HAACP certification. This certification has opened up a new marketing opportunities and during the last quarter the processor secured a contract to supply yoghurt as part of passenger meals during inflight service on Rwandair. This is a significant milestone for Blessed Dairies providing exposure in an international marketplace which has strict supply parameters.

New US Ambassador visits RDCP II supported site

The new US Ambassador to Rwanda Ms. Erica Barks-Ruggles who arrived in January 2015 made one of her

first site visits in Rwanda to an RDCP II supported MCC in Kamonyi district on March 11 2015. The Ambassador was joined at the site by the Rwandan Minister of Agriculture and Animal Resources Ms. Gerardine MUKESHIMANA. The Ambassador was also accompanied by the USAID Mission Director and the Economic Growth Team Lead at USAID. Guests were welcomed to the site by the Mayor and vice mayor of Kamonyi district.



IR 1: Rwandan Dairy Products Meet COMESA Standards

Rwanda produces over 500 metric tons of milk annually which is largely marketed through poorly regulated informal routes. This results in losses to the dairy sector, both in volume and value of dairy products marketed. RDCP II aims to position Rwanda as a hub for high quality dairy products by benchmarking local standards to regional COMESA standards and working with sector actors to achieve the same through a reward mechanism for implementing a range of best practices under the Rwanda SoQ program. During this quarter there was progress across the dairy value chain among artificial insemination service providers, dairy farmers trained and milk transporters engaged, as well as dairy processors and MCCs enrolled and encouraged to drive this process. Also, this quarter RDCP II worked closely with RAB, RALIS and the University of Rwanda to host the first mastitis

Figure 6: Dairy farmers have been sensitized on the milk handling best practices in order to gain more commercial benefits

conference in Rwanda that attracted stakeholders from across the dairy value chain. Stakeholders across the dairy value chain were also engaged by the USAID RDCP II mid-term evaluation team.

In an endeavor to introduce a sustainable farmer to farmer knowledge transfer system, activities to further train, support and equip the 349 model farmers trained up to the end of the last quarter continued. The trained model farmers continued to disseminate knowledge and skills through convening meetings with dairy farmers in their communities. The process to select another cohort of model farmers to be trained began. During the quarter, the draft Ministerial Instructions were reported to be close to promulgation but this had not happened by the end of the quarter. It is still anticipated that once promulgated the Instructions will have broad legal backing, and hence enable enforcement of best dairy practices across the entire dairy value chain from production through transportation, handling and processing. This will be the fulcrum for a fully functional national inspection and certification program under RALIS.

IR1.1 Best practices employed by small holder producers and other actors

Key achievements for this period:

Figure 7: RDCP II maintains engagement of women in the dairy sector

- This quarter, 3,490 (female - 1,177 ; male – 2,313) individuals including dairy farmers and other value chain actors benefited from training on dairy best practices, gender and BDS skills. This brings the cumulative number of individuals that have benefited from training to 30,385.
- 1,515 vulnerable households benefited from RDCP II interventions giving a cumulative total 11,494 vulnerable households reached since the beginning of the RDCP II program.
- 78 small growing businesses received business development services during the quarter giving a cumulative total of 6,621.
- 401 full-time equivalent jobs were created as a result of RDCP II interventions. Cumulatively, as at the end of the quarter, 9,592 jobs have been created.
- During this quarter 4,648 farmers and other dairy actors applied improved technologies and management practices giving a cumulative total of 21,195 since the beginning of the program.
- This quarter seven AI service providers examined 1,684 cows for pregnancy for beneficiaries in Bugesera, Gasabo, Gatsibo, Gicumbi, Nyabihu, Rubavu and Rwamagana districts. Average conception rate was 67% after one insemination/cow.
- During this quarter 289 model farmers (99 female & 190 male) were followed-up to track their activities. These model farmers disseminated dairy best practices knowledge to a total 1,795 farmers (female – 554; male – 1,241) across the 17 RDCP II districts of operation.
- In collaboration with RAB and the University of Rwanda, RDCP II hosted the first mastitis conference in Rwanda that presented approaches to mastitis prevention and control.
- 350 new model farmers were selected for training.

In an endeavor to achieve the four core products/activities in relation to best practices i.e., the Feed Flow Plan, the Herd Health Plan, the Reproduction Plan, and the Clean Milk Production Plan and the Seal of Quality, this quarter RDCP II continued service provider capacity building, and farmer training using the trained model farmers. However, as a consequence of RDCP II facilitating the mid-term evaluation, activities were reduced. The approach taken was as described in previous reports in which selected service providers and model farmers were trained on the best practices and then used as TOTs to advise farmers. Increasingly, the model farmers have become the predominant disseminators of dairy best practices to farmers. As reported previously, the model farmers disseminate knowledge and lead discussions on the core dairy best practices, particularly milk production and quality improvement, dairy farming as a business, gender mainstreaming and cooperative management. The model farmers have continued to engage farmers as confirmed by RDCP II follow up of 289 of the 349 that were reached. In order to further enhance the skills of model farmers RDCP II continued giving them equipment and training, particularly on practical use of the equipment.

A new cohort of 350 model farmers from across the 17 districts of RDCP II operation have been selected for training during the next quarter.

A farmer semi-annual survey was conducted during the last quarter (in March 2015) as a follow up on dairy status at farm level with regards to improved technologies implementation, milk production, sales, job creation among others.
Although the trend in adoption of various technologies didn't change compared to 2014 there has been remarkable improvement on some technologies/practices related to milk hygiene which contributes towards improvement of milk quality, and record keeping.
On the other hand gross margin per cow was recorded as US $149.69 for a period of six months. This is encouraging as last year the gross margin per cow for the whole year was US$ $185.96. The next annual survey in August /September 2015 will provide the gross margin per cow for the full year 2015.
The Below figure summarizes farmers adoption of improved technologies and best practices.

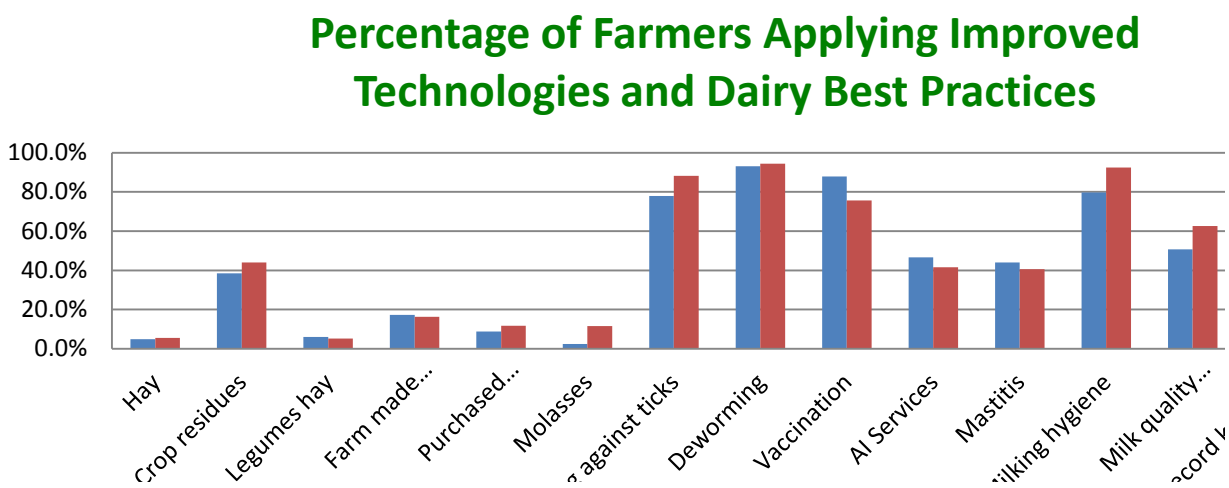


Chart 1: RDCP II Farmers Survey, March 2015

Implementation of Activities

During this quarter, RDCP II trained, through service providers, 883 farmers (390 female: 493 male) from Huye, Musanze and Nyanza districts from 7 sectors. The training covered the standard best practices content including cattle feeding, breeding, disease control, milking hygiene, milk handling, dairy business

management, gender, and cooperatives management (see table 2 below). RDCP II staff and a consultant visited artisanal and large scale feed processors in Huye, Musanze, Nyagatare and Rwamagana. RDCP II followed up 289 model farmers out of a total 349 trained model farmers. All the 289 model farmers followed up adopted new technologies and best practices including Mucuna planting and use in feeding cows and mastitis prevention and control. As in the past, improved technologies and best practices adopted included silage and hay making, use of treated crop residues, minerals, feed concentrates, cow vaccination, deworming, tick control using acaricides, AI, mastitis control, milking hygiene, record keeping and business management best practices.

A total 401 full-time equivalent jobs were recorded this quarter (see FTMS Table). In general, job creation is associated with increased milk deliveries to MCCs and quality standards requirements associated. 378 of the new jobs reported were created at farm level since the beginning of 2015 fiscal year (October 2014) while 23 full-time jobs were created by other value chain actors supported by the program.

IR 1.1.1 Input supplies and Public and Private dairy business services expanded

Key achievements:

- RDCP II built the capacity of 289 model farmers (99 female; 199 male) through additional training and distribution of equipment for demonstrations.
- 9 male service providers from Huye, Musanze and Nyanza were engaged by RDCP II to train farmers and trained 883 farmers (390 Female; 493 Male).
- 7 service providers conducted pregnancy diagnosis on total 1,684 cows inseminated previously in seven districts. Average conception rate was 67% which is above the average of 65% normally achieved.
- In collaboration with RAB and the University of Rwanda, RDCP II hosted the first mastitis conference in Rwanda that presented approaches to mastitis prevention and control. 93 participants (17 Female; 76 Male) mainly University students, lecturers, government officials and private businesses attended the conference.

Figure 8: RDCP II has joined hands with the Rwandan government to fight against mastitis prevalence in Rwanda

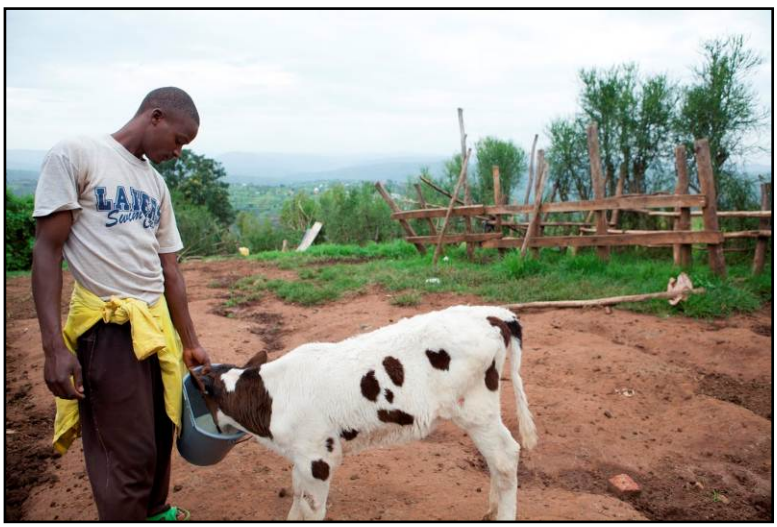


Figure 9: RDCP II has adopted of an approach to train and position model farmers as strategic pillars to improve dairy farming in their communities

Model farmer activities

This quarter, RDCP II distributed various items to model farmers to equip them in this role, Range of items distributed are listed below and will contribute towards achievement of RDCP II indicator related to technology adoption. In this regard RDCP II field staff trained 289 model farmers, of the 349 model farmers on use of these items and related topics. The remaining farmers will be trained early in the next quarter.

Items	Quantity	Farmers received
Mucuna legume seed	1,098 kg	325
Calliandra tree legume seed	88 kg	170
U V plastic for stover treatment	325	325
20-liter jerricans of molasses	317	317
Lab coats	324	324
Record books for model farmers	329	329
Record books for farmers	1,470	1470
Lactometers	319	319
Digital thermometers	313	313
Weight measuring tapes (weighbands)	313	313
Strip cup for testing clinical mastitis	88	88
Cow reproductive calendar	316	316

Table 1: Items distributed to model farmers

Apart from adopting new technologies and best practices themselves, during this quarter the 289 model farmers engaged 1,874 (1,292 Male; 582 Female) dairy farmers in discussions and knowledge sharing on new technologies and dairy best practices (Table 2). As in the past, the topics discussed during the model farmers' and general farmers' sessions include feeding, breeding, cattle diseases and milk quality and hygiene (Figure 1). As reported previously, consistently, the most popular topics discussed were milk quality and hygiene, feeding, breeding and cattle diseases. Unfortunately, gender issues were the least discussed. Perhaps this is a reflection of low perception of farmers on the relevance of gender to dairy issues. RDCP II will continue addressing gender issues to increase dairy output. This activity is conducted in the framework of RDCP II scaling up plan to disseminate key selected technologies to a large number of dairy farmers even beyond the program initial operational areas.

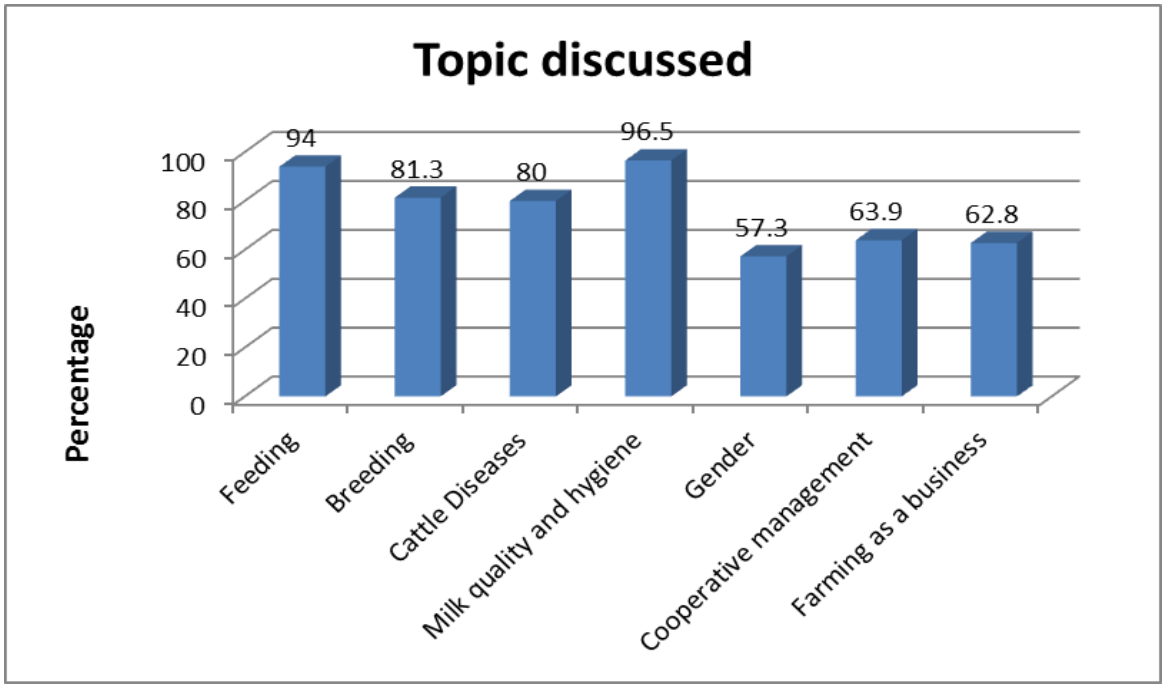


Chart 2: Topics discussed by model farmers and trainee farmers

In addition, 883 more farmers were trained by Service Providers / ToTs engaged by RDCP II in 3 Districts which are Huye, Nyanza and Musanze (see table 2).
Details on other trainings conducted during the quarter are shown in table 2 below but related narratives will appear in subsequent sections below.

Summary numbers of trainings conducted in QTR II 2015			
Training	**Male**	**Female**	**Total**
Cooperatives trainings (Ag-Pro)	215	80	295
Cheese makers trainings	82	11	93
Milk Sellers / Milk Suppliers trainings	28	5	33
Mastitis Workshop	76	17	93
Seal of Quality trainings (SoQ)	184	35	219
Farmers trained by Model Farmers(combined numbers)	1,292	582	1,874
Farmers trained by Service Providers(combined numbers)	493	390	883
TOTAL	**2,370**	**1,120**	**3,490**

Table 2: Numbers of trainings conducted in quarter II 2015

AI Service Providers engaged - Artificial insemination and pregnancy diagnosis

Across seven districts, seven service providers examined cows for pregnancy using rectal palpation (Table 4). Out of 1684 cows examined, 1128 conceived (67%). This conception rate is higher than the 65% pregnancy rate average for the CRESTAR synchronization protocol. However, the conception rate range was 56% to about 77%. This shows that some of the service providers do not have good AI results.

District	Service Provider	No. of Cows Examined	No. of Cows PD Positive	% of PD Positive Cows	No. of PD Negative Cows
Bugesera	Nyamata Agri-inputs Ltd	299	213	71.2	86
Gatsibo	AGROJOY	300	205	68.3	95
Gasabo	COOVIGI	217	137	63.1	80
Gicumbi	COOVIGI	187	105	56.1	82
Nyabihu	UPROCENYA	184	141	76.6	43
Rubavu	BAIR	91	68	74.7	23
Rwamagana	BARICE Ltd	406	259	63.8	147
Total/Mean		**1684**	**1128**	**67.0**	**556**

Table 3: Pregnancy diagnosis (PD) results from pregnancy examination conducted by services providers in seven districts

Service providers train farmers

RDCP II facilitated service providers to train 890 farmers (female – 391; male - 499) in Huye, Musanze and Nyanza. Topics covered were those for the RDCP II standard dairy best practices course for farmers that includes cattle management (e.g., feeding, breeding & herd health), good quality milk production, milk hygiene and handling, dairy business management, and gender issues..

Feed input supply

This quarter, in the company of the feed consultant, Dr Nathaniel Makoni, ABSTCM Kenya Ltd, RDCP II staff visited the two RDCP II feed mill grant recipients, VETOPROX in Huye District and NADCO in Nyagatare District (see report in Appendix).

At VETOPROX, the consultant noted that there were inefficiencies in the mill and mixer that were leading to slow processing. As a follow-up to the report, the suppliers of the equipment BrazAfric visited the processing plant and rectified the inefficiencies.

Figure 10: RDCP II has embarked on equipping the dairy sector as well as promoting best feeding practices for the dairy cows

VETOPROX feed sales have remained at around 2.5 metric tons per month that was reported for the last quarter. However, linkages with dairy farmers that were facilitated by RDCP II have maintained the sales. Also, because of this linkage VETOPROX is, unlike established feed sales trends, selling more dairy (78%) than poultry (22%) feed. In order to increase sales, RDCP II has advised VETOPROX to continue searching for low cost ingredients to reduce feed prices, and hence attract more farmers to buy the feed.

The visit to NADCO was a bit disappointing in that, while NADCO have been reporting increases in feed sales in the last two quarters, the feeds sold were derived from partial use of the RDCP II donated

equipment. In fact, NADCO was not using the donated feed mill but was only using the mixer. The ingredients, largely maize bran, were being sourced from an adjacent mill. As a consequence of NADCO partially using the donated equipment, RDCP II has withdrawn the equipment and is currently evaluating potential equipment recipients from MCCs in Nyagatare.

Based on experience with VETOPROX and NADCO and the challenges facing the stock feed sector in Rwanda, RDCP II considers large scale feed processors that can export and vertically integrate operations (e.g. owning farms that provide a guaranteed market for stock feeds) to have better prospects to succeed in the feed business than artisanal feed processors (e.g., VETOPROX & NADCO).Again, in the company of the feed consultant, Dr Nathaniel Makoni, ABSTCM Kenya Ltd, RDCP II staff visited two large scale feed processors, Premium Animal Feed Industries Ltd (PAFI) in Rwamagana and Zamora Feeds Ltd in Musanze. The purpose of the visit was to determine the potential of the processers (see report in Appendix) to produce and distribute feeds to dairy farmers. Both PAFI and Zamura Feeds individually have capacity to produce at least 120 metric tons of feed per day. They both import most of the raw materials, particularly soyabean cake, fish meal, and feed premixes from Kenya, Uganda and Tanzania.

Locally sourced feed ingredients include soyabean cake from Mt Meru Soyco Company in Kayonza, wheat bran and pollard from Pembe Industries in Byumba, and maize bran from Minimex Company in Kigali.

PAFI has equipment to make pelleted feeds for cattle, poultry, swine and fish. It can also make floating feeds for fish. While the PAFI processing plant has these various lines for making animal feeds and large silos for maize storage, the electricity consumption when fully operational is very high at 400 kw/hour. Currently, PAFI is only selling 40 metric tons of poultry feed per month. It has just sent out test feeds for dairy cattle to farmers. Despite the large capital outlay in machines, PAFI still needs to improve operational efficiency and technical capacity. It needs equipment for testing moisture content of raw material ingredients and a laboratory for quality control. The capacity of the staff needs to be improved. RDCP II will work with PAFI staff to train them in some aspects of feed formulation and facilitate linkages with dairy farmers.

Zamura Feeds has equipment for making cattle, poultry and swine meals. It has a quality control laboratory. It also has an extruder but unlike PAFI it does not have a pelleting machine. The equipment consumes less power than the PAFI feed mill, and hence is more efficient. Currently, Zamura is selling 120 metric tons of poultry feed per month. However, only 10 tons of dairy meal is sold per month. Zamura is a vertically integrated company with a 7,000 layer bird poultry farm. The Zamura feed mill supplies feed to the poultry farm. This integrated model will enable Zamura Feeds to get a guaranteed market that can assist it to meet overheads. Zamura also has a feed sale outlet in Nyabugogo, Kigali. In general, Zamura staff are well trained and have in the past attended RDCP II feed processing training. Zamura is well placed for sustainable growth and has already started a feed distribution network that is reaching the Democratic Republic of Congo. However, it still needs to create more linkages with dairy farmers for distribution of its products.

Zamura Feeds sells its dairy meal at a price of 200 Frw/kg which is still higher than the milk price per liter (180 Frw). At this milk price to feed price ratio, it is uneconomic to feed dairy cows. Both PAFI and Zamura should endeavor to source raw materials from local sources to reduce the end price of the feed. To increase dairy feeds sales, they need to develop least cost formulations that use by-products. RDCP II has discussed these options with the two processors and will continue engaging them and facilitate linkages with dairy farmers and their representatives.

Disease Control Activities

In collaboration with RAB and the University of Rwanda Busogo and Nyagatare campuses, RDCP II hosted the first mastitis conference in Rwanda. The conference was attended by international speakers and local stakeholders. RDCP II work under UC Davis led DDM program was presented. The papers presented at

the conference reported mastitis prevalence to range from 39% to 62%. The conference agreed that such a prevalence level was too high. Also, the MCCs and milk buyers do not test for mastitis. It is anticipated that when the Ministerial Instructions on milk hygiene and handling are promulgated, mastitis testing will become mandatory. The DDM pilot work and other papers that were presented demonstrated that somatic cell counts and total bacterial counts in milk could be reduced through, among others, teat dipping with disinfectant and improved hygiene practices.

Milk Collection Center milk volumes collected: Volume of milk marketed/sold by Milk Collection Centers (in Liters)

Volume of milk that passed through MCCs during the quarter was **11,377,640** liters from the 17 districts of program operation. Nyagatare and Gicumbi rank highest in volumes over the last 3 months, followed by Rubavu, Gatsibo and Nyanza. Volumes for Kicukiro, Bugesera, Ruhango, Musanze and Gisagara are still low compared to other districts.

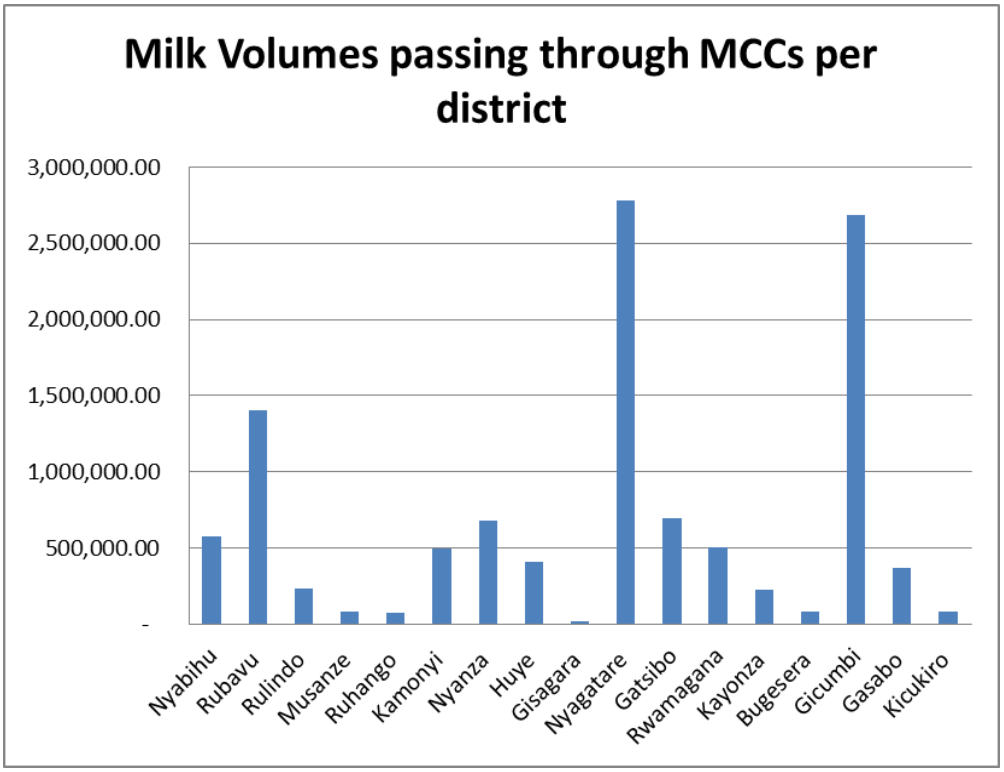


Chart 3: Chart comparing milk volumes per district. Source: Cooperatives/ MCC monthly reports

Actual number of liters that passed through the MCCs during the quarter was liters 11,377,640 from the 17 districts of program operation and the total quantity of liters of milk marketed MCCs during the year is 22,056,145 liters, making a cumulative quantity of 83,795,853 liters since the beginning of the program in 2012 . Considering the average price of 171 Rwf per liter paid by MCC to farmers supplying milk, the total amount paid to farmers during the last quarter is equivalent to USD $2,817,634.24 and USD $5,462,130.04 since the beginning of fiscal year 2015.

Gisagara District requests for assistance to revive MCCs operations

As a consequence of no functional MCCs, Gisagara has consistently had low milk volumes collected. It has only one MCC, Ndora MCC, which is not operating. Given this situation, the Mayor of Gisagara invited RDCP II to a meeting to discuss how to reactivate Ndora MCC. To worsen the situation, the district has

weak farmers cooperatives which have been unable to run group activities including Ndora MCC. Cognizant of the weak farmers cooperatives that erstwhile were trained by RDCP II with little change in their efficiency, RDCP II staff and the Gisagara Mayor and his district officials recommended the takeover of the MCC by a private entrepreneur.

In an effort to ground truth the Gisagara District milk production potential, the RDCP II team and Gisagara District conducted field studies. Contrary to claims that Gisagara District did not produce sufficient milk to sustain MCCs, it was established that the district has a cow population of about 23,500 cows and a daily production of about 23,300 liters of milk (Table 7). It was estimated that about 23% of milk produced is sold in Huye District and to local restaurants and households at prices ranging from 150 to 200 Frw/liter.

Figure 11: RDCP II is closely collaborating with government and other stakeholders to ensure that milk is delivered through MCCs to maintain the required quality.

Based on these statistics revealing abundant quantity of milk produced without a firm market, the RDCP II and district officials team recommended that Ndora MCC be run by a private entrepreneur. To this end, RDCP II will facilitate implementation of this recommendation.

IR 1.2 Expanded access to milk and dairy product quality monitoring and certification services

Rwanda National Mastitis Workshop

The 1st Rwanda National Mastitis Workshop was held at Nobleza Hotel in Kigali from 24th to 26th February 2015 where results from this DDM pilot study in Rwanda were presented. The theme of the workshop was the he role of public and private Sector Institutions in the control and prevention of mastitis. Workshop participants included policy makers of Government of Rwanda, Government Agencies' leaders and technical staff from RAB and, RSB, dairy processors, RNDP Board members, dairy industry service providers, dairy products sellers and consumers' organization, academic staff and students of veterinary medicine of University of Rwanda (Busogo and Nyagatare Campuses) and visiting experts from University of California, Davis and Rutgers University New Jersey. The workshop concluded with a session for building a road map for

Figure 12: Local stakeholders including University of Rwanda teaching and administration staff participated in the national debut mastitis conference.

mastitis prevention and control in Rwanda. The lead agency in-charge of implementing this road map will be RAB, Directorate of veterinary services in collaboration with University of Rwanda and other key development partners.

This workshop was followed on February 27 by a half day training of technicians from MCCs and processing units at RDCP II office that had received the Porta Science kits under RDCP II grant activity. This training was also attended by the local supplier of Porta SCC and accessories and consumables. The training was conducted by Prof. David L. Lee, Rutgers, University of New Jersey, USA. The participants received a refresher training on effective use of Porta Somatic cell Count Digital reader in the detection and control of mastitis.

Kigali Milkshed:

RDCPII trained KOZAMGI 9 technicians and transporters on use of SoQ kits. As a result of this training, the following milk assessment protocols/technologies were transferred and are currently being applied:

- Testing for organoleptic properties
- Testing for milk wholesomeness
- Testing for alcohol concentration
- Testing for milk density (added water and solids)
- Testing for milk temperature
- Testing for mastitis using CMT technology

Figure 13: RDCP II has continued to train milk quality technicians at MCCs across the four milksheds

Three milk kiosks were trained to use seal of quality kits. These kiosks include Giramata Milk Kiosk, Kicukiro Milk Center and Joyeuse Milk Kiosk. In total six (6) staff including 3 males and 3 females were trained to use the following: alcohol gun, alcoholmeter, lactometer, Infra-red thermometer, fridge and fridge guard, Cool box, ice packs and dipper, measuring cylinder, over coats, gumboots, masks, gloves and head covers. The training took place on 05/02/2015.

RDCPII facilitated a study tour for the Kigali Milk Sellers Cooperative (KMSC) to Nyanza on February 13, 2015. The objective of the visit was to provide exposure to members of KMSC on new ideas of cooperative management, milk quality practices, milk processing and milk & milk products marketing. In total, 18 members comprising of two females visited four (4) milk processors including: Zirakamwa Meza Dairy, Haji Enterprises Ltd, KIDACO and Cooperative Indakemwa Mugandamure. The former two are private dairy companies, whereas the latter two are dairy milk seller's cooperatives. Members of KMSC visited Kinazi Dairy Cooperative, a cooperative collecting and selling fresh and fermented milk on behalf of its members.

Key outcomes of the study visit included:

- Seeing the benefits of working as a cooperative to improve access to grants and technical support, as is the case of KIDACO
- Observing that production of quality products and services can lead to rapid growth of an enterprise, as is the case of Haji Enterprise Ltd.
- Knowledge on the process of production of quality traditional cultures as seen at Haji Enterprises Ltd.
- Understanding that branding is an excellent marketing tool

- Gained knowledge on how to improve Good Hygiene Practices (GHPs) at a dairy unit
- Learned how dairy products such as yoghurt are produced

RDCPII facilitated training of Kicukiro and Gicumbi districts cheese processors (Royal and Blessed dairies respectively) where 7 of their technicians were trained by RDCPII hired cheese consultant, Kobus Mulder from 16th to 17th February 2015 at Masaka incubation Centre.

Outcomes of the training include

- Cheese makers were equipped with skills to make different types of cheese such as: Mozzarella, Cheddar, Camembert, St. Paulin, Gruyere, Feta, Mascarpone,
- Cheese makers were equipped with skills on using the pH meter in detecting the acidity of the cheese as well as its calibration.
- Attendees (technicians) attained butter production skills for the first time

Western/Northern milkshed

Inspection visit by RDCPII staff was carried out in western/northern milkshed.
Several cheese making units were visited in February 2015 to provide guidance on improving hygiene with emphasis on food safety and environmental protection. . The visited units included: Fromagie la Reinne, Gishwati farms Ltd, Muhe farms Ltd, Gishwati Mountain Farm Ltd, Ingabo dairy Ltd, Ubumwe Farming Company Ltd and Cooperative Uruhongore. Each was advised on the benefits of a clean processing unit, as well as the environment on safety of food. They are currently making the necessary improvements as recommended. For example, Ingabo Dairy water evacuation channels (drainage system) were previously damaged and clogged causing bad smells in the processing unit and its surroundings. Following the visit the whole drainage system was repaired. Presently water and whey from the processing unit flows properly from the system improving environmental condition.

Southern milkshed

On 29th January 2015, MCC technicians of Uruhimbi in Kamonyi district received a refresher training on SOQ kit utilization whereby 4 (2females and 2 males) technicians attended the training and they are able to use the kits very well.

Eastern milkshed: Trainings on the use of SOQ kit at MCCs

As a result of SoQ kits, milk is tested so good and bad milk can be detected on arrival at MCCs. For example, in January 2015, in Nyagatare District 1,208,840L of milk was accepted and 3,892L of milk was rejected while in Gatsibo a total of 242,099L of milk was accepted and 2,761L of milk was rejected due to poor quality.

Rwimbogo MCC milk rejections reduced from 800 liters/ month (as of the previous months) to 65 liters/month in November last year due to milk testing & provision of technical advice by RDCPII staff. From December 2014 to March 2015, there were no milk rejections at the MCC. This is due to the fact that MCC members (farmers) are now very informed and take precautions right from the farm level to deliver safe milk.

IR 1.3 Consumer preferences drive quality improvements

In this quarter, Ministerial Instructions on milk quality control were forwarded by Ministry of Agriculture and Livestock to Prime Minister's Office where they are currently awaiting Inter Ministerial Committee's approval before they can be sent to the Cabinet for final approval and eventual publication in the Official

Gazette. The main purpose of these Ministerial Instructions is to determine guidelines for milk handling from farm to the consumer which will be a legal basis for implementing hygiene in the dairy sector by all concerned actors. RDCP II actively participated in the drafting and technical guidance to the Government regarding the contents of these instructions. Once in place, every actor along the whole value chain will have their specific roles clearly stated and penalties outlined therein for any non-compliance. RALIS submitted a grant approval request to RDCP II. The main purpose of this request is allow RALIS to commence monitoring and certification of best practices related to milk handling as specified in the Ministerial Instructions at MCC, transporter and kiosk level. The grant approval request will be submitted to USAID during May following internal review and approval by Land O'Lakes compliance team. Shisha Wumva campaign focused on best hygiene practices across the whole dairy chain. This quarter, RDCPII produced and framed posters which are now hanging at many MCCs across the seventeen districts, the majority of milk zones in Kigali as well as Government Offices such as RAB. In addition to the best practices posters leaflets will similar information are being distributed at farmer trainings. All carry best milk handling practices messages for the farmer, transporter (both large and small scale transporter), cow milking person, milk selling person (milk kiosk operators) to maintain hygiene as a result of following best practices along the entire dairy value chain.

Figure 14: RDCP II has rolled out a campaign to disseminate basic information on best practices to the rural farmers

These materials were first disseminated in Gatsibo district during the launch of Girinka week in collaboration with RAB at which RDCP II was a key facilitator. At particular events during the quarter village drama was enacted to convey messages combining the themes of milk consumption and milk quality. These events included the Girinka week launch in Gatsobo on January 9th and the UR research exhibition launch at Busogo campus in March 2015. This function was attended by Senators, Vice Mayors of Musanze and Nyabihu districts, Professors, researchers, farmers, MCC owners and University students.

Figure 15: Drama kits across rural Rwanda as part of the RDCP II outreach programs designed to convey messages on dairy best practices and importance of drinking milk

Messages on the benefits of milk in nutrition are being developed for distribution during the next quarter. The target audience for these messages will be the Girinka beneficiaries. Messages will be pictorial and will be mainly distributed during farmer training sessions across RDCP II areas of operation in collaboration with key implementing partners both public and private. Messages will be on leaflets and will be supported by radio announcements. All messages continue to be linked to the Shisha Wumva theme to build association with the dairy sector key implementing partners in particular Minagri and RNDP.

IR 2: Expanded Investment in Dairy Processing and Marketing

Highlights in this section include:

- Business development specialists complete first cycle of AgPro support to dairy businesses (34 dairy business and 295 participants reached)
- RDCP II facilitates Q2 milk shed working group meetings in all milk sheds
- RNDP recruits for Executive Director
- Milk zones adopt quality best practices developed with support of RDCP II

RDCP II aims to increase both public and private investment in human and financial capital to enable Rwandan dairy products to become locally and regionally competitive. This calls for concerted efforts and increased stakeholder engagement to improve both policy advocacy and leadership development within dairy organizations and businesses.

IR 2.1 Dairy Sector Leaders Empowered to Lead Development

During the last quarter, dairy stakeholders have been engaged in various forums.

RDCP II facilitated Q2 milk shed working group meetings in all milk sheds

RDCP II facilitated milk shed dairy working group meetings in key milk shed of Kigali, Eastern province, Northern Province as well as Southern province. As part of the program commitment to scale up, RDCP II also facilitated a follow up meeting in the Western province to follow on an earlier session in which members had expressed interest to work with the program to continue these milk shed interactions. A key development of these meetings is the uptake of leadership by dairy actors in the respective milk sheds. Following earlier meetings in which the dairy working groups in the respective milk sheds elected their leaders, this occasion was an opportunity to see the leadership in action with little facilitation by the project. This is a demonstration of capacity within the dairy sector leadership that going forward. Also notable is the quality of debate and ownership in the discussions, a key pillar of sustainability for the program as we start the fourth year of implementation.

RNDP recruits for Executive Director

The Rwanda National Dairy Platform in March recruited for an Executive Director position to take on the day to day management of their offices in Masaka. This follows increasing demand by the industry leaders to have a full time staff to keep track of developments and regularly attend to the sector needs in a timely manner. While the board has not developed its capacity to pay for such a high caliber position, they have approached RDCP II for support towards initially supporting this role on a short term arrangement until their grant application has come through following review of the same. RDCP II short term support for this executive position is expected to commence during May, as interim support, during which the grant approval process is also expected to be finalized in the next quarter following submission for approval to USAID. RNDP is expected to play a leading role in the implementation of the National

Dairy Strategy. Following the development and approval of the RNDP 5-year strategy, it's important that RNDP generates required resources to achieve its broader objectives which include;

- To serve as the voice for private sector at both the national and decentralized levels
- To serve as a forum for public-private dialogue (PPD)
- Advocate for dairy industry and consumers of the dairy products,
- To promote professional, social and economic development interests of the members,
- Train member and equip them with useful information for the development of the profession,
- Promote social dialogue among different players in the dairy industry,
- Organize and conduct trade fairs at both national and international level,
- Create and improve the already existing relations with other platforms that have similar vision on the national and international level.

Figure 16: RNDP is expected to represent the dairy sector

In order to achieve the above objectives, RNDP requires a solid leadership to provide the level of mentorship that the clusters need to achieve their full potential and productivity. It is against this background that RDCP II will be submitting a grant request for funding support.

SME follow-up meeting

Following a successful SME forum in the previous quarter, the Ministry of Trade and Industry during this reporting period hosted a feedback session with selected SME facilitators with RDCPII and RNDP representing the dairy sector. This feedback session was intended to discuss progress regarding their respective action points. The ministry pledged to periodically convene the same groups as a way of ensuring needed support to the clusters is provided particularly from the government agencies responsible for trade promotion. These forums provide a platform for private and public sector dialogue resolving any critical issues affecting their sectors.

Dairy businesses applying new technologies and management practices

A total of 78 new dairy businesses, in addition to those already engaged with RDCP II, were introduced and benefited from improved technologies and management practices. Technologies and management practices that are the highlight of the quarter are specialty cheese making techniques (mozzarella, Cambert, Gruyer, St Paulin, etc.), use Seal of Quality kits, Cooperative management through Agro-Pro etc. In addition the above business received technical assistance from RDCP staff and business advisors with regards to day to day management and business linkages though dairy forums, meetings and trainings.

For Cooperative, trainings were conducted using Ag-Pro tool which focuses on key areas such as management of cooperative as a business , cooperative law, leadership & governance, action planning & strategy setting, developing mission, vision, shared beliefs & values and understanding roles and responsibilities of cooperative members/shareholders, staff and BOD.

Dairy Consumer campaign focuses on quality improvements in milk kiosks

During the reporting period, the dairy consumption campaign focused on promoting dairy handling practices across different value chain actors with particular emphasis on milk zones and milk kiosks. Both form the bulk of the dairy retail industry in Rwanda and are a key influence in the quality of milk that consumers purchase. With this approach, RDCP II aims to communicate through the kiosk owners' quality expectations thereby facilitating a culture of milk consumption that promotes best practices across the dairy value chain. By the end of quarter Inyange Industries reported an increase in daily sales through the Milk Zone network of an average of 30,000 litres per day

Previous dairy consumer campaign had focused on benefits of milk for human being and encouraged consumer to drink more milk. The survey done at farm level in March 2015 showed increased awareness of farmers about the campaign. 66% of farmers heard about the campaign against 31% of the farmers in October 2014. As adverts through radio and TV had decreased the drop in percentage of awareness is also reflected through these media. But on the other side as shown in the figure below awareness through exhibition, meeting and farmer to farmer communication has increased.

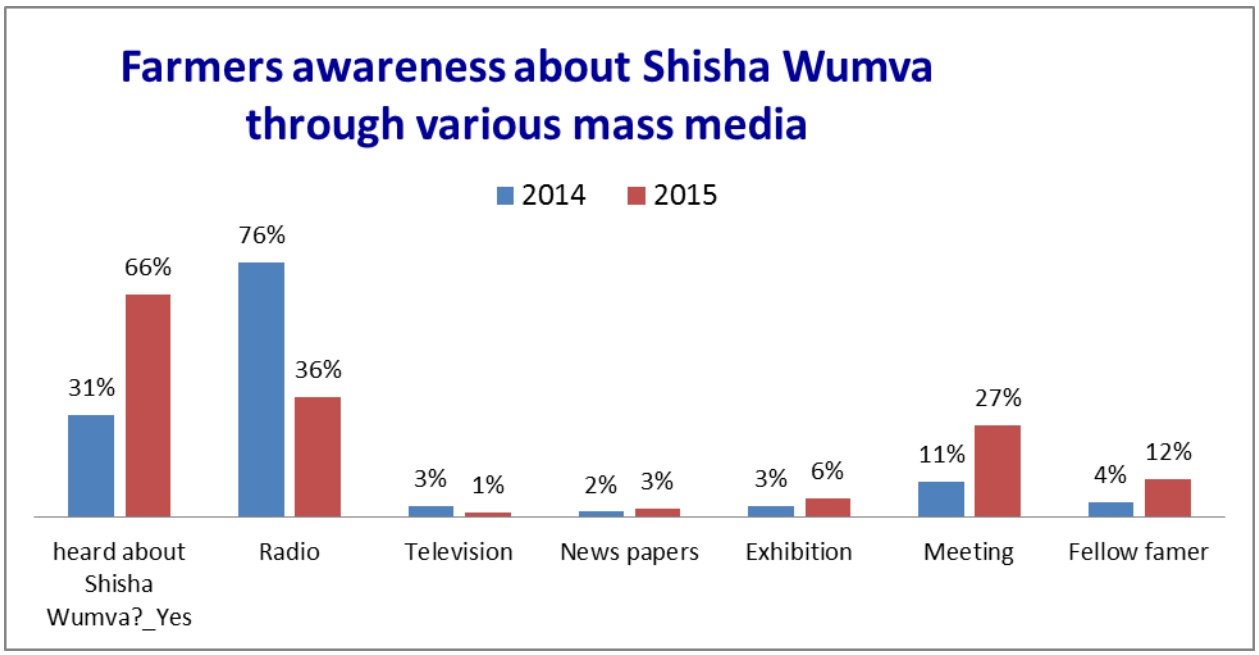


Chart 4 Source: RDCP Farmer survey, March 2015

Progress on AgPro tool implementation

Business development specialists complete first cycle of AgPro support to dairy businesses. Following a three month engagement of dairy business development consultants to support the roll out of business performance support across selected milk collection centers and their respective dairy cooperatives, an evaluation of the businesses is now due to determine to what extent the support has benefitted the entities and any needed improvements towards sustainability of recommended business practices.

Beginning January 2015, the project fully started to implement the AgPro system together with the accompanying Performance Measurement and Management system (PM2) to 31 dairy cooperatives and three dairy related enterprises spread in the four milksheds covered by the RDCP II project.

The aim of this intervention was to address six key constraint capacity areas of Leadership- adaptive capacity, management, operations, supply/processing & marketing, and productivity & financial management. It was anticipated that the interventions will address the internal and external challenges faced by the producer groups and result into more efficient, profitable and self-sustainable entities which will contribute directly to project targets.

The work was completed by nine cooperative/SME technical assistants who were recruited to be engaged on short term agreements.

During this quarter the team engaged 34 businesses; 31 cooperatives & 3 SMEs (input providers) across the four milksheds providing technical support in business management and leadership.

During implementation, 28 (27 cooperatives & 1 SME) collaborated fully or partially throughout the period. Short term consultants were assigned to train, mentor and provide technical assistance to Cooperatives in order to deliver the following:

1. Review/draft partnership agreement or MOUs with Land O'Lakes - RDCP II;
2. Updated membership list for at least 2 cooperatives;
3. At least 2 cooperatives having contracts with buyers;
4. Update alliances/relationships with service providers & develop staff and supplier/buyer contracts;
5. Development of a partners' log book;
6. At least 10 lead farmers identified and trained using customized AgPro modules in Farming as a business;
7. At least 15 BOD & Supervisory committee members from 2 dairy Cooperatives trained on leadership and governance;
8. Review of cooperative bylaws and training of the BOD on the Rwanda cooperatives law, roles & responsibilities;
9. At least 2 cooperatives have a written mission/vision, shared beliefs and values known by all members;
10. Value of daily/agricultural loans obtained from financial institutions;
11. Action plans & strategic plans developed for at least 2 cooperatives;
12. At least 2 cooperatives adopting a standard bookkeeping and accounting system with focus on improved documentation & filing systems at the assigned MCCs/cooperative;
    a. Ensure completion and submission of monthly business information and also make sure the MCC technical staff has adopted this practice
    b. Also ensure that Balance sheet items are well recorded and valued
13. Reduction in milk rejections, spillage and spoilage by 5%;
14. At least a 5% increase in membership in the assigned cooperatives;
15. At least a 5% increase in milk volumes collected by MCC's;
16. At least 4 improved member services provided by 2 cooperatives;
17. At least 2 cooperatives that have developed milk Quality procedures and HR Policies.

Key to the three month AgPro program was training in Farming as business, leadership & governance, cooperative law and review of existing bylaws, action and strategic planning. These trainings were conducted at cost share basis in collaboration with the cooperative leadership and farmers. Cooperative leaders, members and farmers that benefited from these trainings were 220 (57 female, 163 male).

Milk shed	District	Planned # Cooperatives/MCCs	Planned COOP/MCC/SME	# Coops/MCCS/SMEs worked with	# of support staff (STTA)	Implementation
North	Musanze	3	Agiragitereka Kinigi, Zirakamwa Muhoza & ATVET	2	1	Planned activities delivered apart from Muhoza who did not collaborate. During implementation ATVET was added on request but later did not spare time for the STTA
	Rulindo	1	CTSOR			
	Nyabihu & 1 from Rubavu	3	Zirakamwa Twicundire Mizingo, CEMO & CEZONYI	3	1	Planned activities delivered
	Rubavu	3	KOAIBU Urumuri, CODERU & KAMU Zirakagwira	2	1	Planned activities delivered apart from Zirakagwira
South	Huye	3	Agiragitereka Huye, KIDACO & VETOPROX	3	1	Planned activities delivered. Agiragitereka had internal conflicts which delayed STTA support
	Nyanza	3	Gwizumukamo Busoro, Giramata Mworozi & Jyambere Mayaga	3	1	Intervention was done on all but for only one month because STTA fell sick and could not continue with the assigned duties.
	Kamonyi	2	Amizero y'aborozi & COOPEKA Kayenzi	3	1	Planned activities delivered. Turengere aborozi BOD did not fully collaborate
	Ruhango	1	Turengere aborozi Buhanda			
East	Nyagatare	4	KAMADAMACO, BCRK, BNRT & NADCO	4	1	Planned activities delivered. NADCO was dropped in the third month due tonon performance
	Gatsibo	2	Rwimbogo, MUDACOS	4	1	Planned activities delivered. Buhabwa-MUFCOS closed for 5 moths and only opened in te third month-March. COOPAG, DUFACO& CDA did not receive direct AgPrO STTA support due to budget constraints but program staff supported at different levels.
	Rwamagana	**3**	**COOPAG, DUFACO & CDA**			
	Kayonza	2	Nyamiyaga (GAFCO) & Buhabwa (MUFCOS)			
Kigali	Bugesera	2	KOPEZIRU & BMCC	4	1	Planned activities delivered. KOPEZIRU slowed intervention due to lack of market & low production. KOZAMGI experiences milk spoilage due to lack of equipment-Milk cooling tank
	Gicumbi	2	COPEMOBU & KOZAMGI			
	Total	**34**		**28**	**9**	

Table 4: Number of cooperatives & SMEs engaged under AgPro per district:

Way forward:

- The PM2 tool in collaboration with MINAGRI-LISP is being translated to Kinyarwanda.
- Individual complete cooperative quarterly assessment reports shall be finalized and shared in Q3.
- Complete AgPro implementation process and progress report and PM2 results shall be reported in quarter three.

Cooperative & Union general assemblies

As part of the AgPro implementation plan, cooperatives were advised to hold their first 2015 general assemblies. Out of 31 general assemblies expected to be take place during the quarter, 25 cooperatives had Annual General Meetings and/or extraordinary meetings. Details of participants to these meetings will be shared in the next quarterly report.

New cooperatives have been engaged and benefited from program activities such as trainings; these are RUDACO in south, HOK-Hinga Orora Kijyambere (Karama) in East and AYERA in the North. These shall be considered more in the next quarter-3 for improved performance and engagement with dairy farmers.

IR 2.2 Increased Dairy-Related Investment

Promote investment in dairy

During the last Quarter a total of 277,034,000 Rwf (US$ 395,763) was invested by dairy enterprises in the Dairy sector across all the Milk sheds. Kigali Milk shed actors invested more money equivalent 154,600,000 Rwf (US$ 220,857.14) followed by the Eastern milk shed which recorded 72,409,000 Rwf (US$ 103,441.42). The Northern and Southern milk sheds took the third and fourth positions, with 41,300,000Rwf (USD $ 59,000) and 8,725,000 Rwf (US$ 12,464.28) respectively.

Stimulate supply and demand for dairy-related financial services - Loan approvals and disbursements

Milk Shed	District	Value of loans (USD	Number of borrowers	Total value of dairy Investment (USD)
Northern	Rubavu	42,143	59	42,143
	Musanze	1,429	1	1,429
	Rulindo	15,429	8	15,429
Southern	Huye	10,617	1	10,617
	Nyanza	776	8	776
	Kamonyi	571	2	571
	Ruhango	500	1	500
Eastern	Rwamagana	14,286	1	14,286
	Gatsibo	17,143	121	64,286
	Nyagatare	24,870		24,870
Kigali	Bugesera	13,714	18	13,714
	Gicumbi	200,000	1	200,000
	Gasabo	7,143	6	7,143
Totals		**348,620**	**227**	**395,763**

Table 5: Loans disbursed during this quarter

Different value chain actors acquired loans from Banks such as BK, BPR UoB, as well as MFIs such as SACCOs.

In Rubavu, for example, a total of 59 farmers from Tuzikamire Kabumba cooperative, located in Bugeshi Sector, acquired 29,500,000Rwf (US$ 42,142.85) loan from UoB to buy cows to increase milk production. The same bank i.e. Urwego Opportunity Bank (UoB) is processing another loan for 142 farmers from Kabu Uragatuga Farmers' cooperative located in Busasamana Sector , Rubavu District and its also processing 25,000,000Rwf (US$ 35,714.28) for Ayera cooperative located in Musanze District.

In Musanze one farmer acquired 1,000,000Rwf (US$ 1,428.57) from a Sacco while in Rulindo eight farmers acquired 10,800,000Rwf from Ntarabana SACCO for dairy related activities.

In the Southern milk shed, RUDACO, a new Milk sellers Cooperative borrowed 7,432,000 to renovate their building and purchase dairy equipment from BK, Huye Branch.

In Kamonyi, two farmers accessed 400,000 Rwf (US$ 571.42), from a Gacurabwenge Sacco while in Nyanza, 8 transporter s borrowed 543,000 Rwf (US$ 775.71) from BPR in order to pay farmers for their milk and in Ruhango, a veterinarian acquired 350,000Rwf (US$ 500) from Byimana Sacco to buy inputs.

In the Eastern milk shed, nine farmers from BCRK accessed 1,414,000 Rwf (US$ 2020) from a local SACCO, 16 farmers from Kamadamaco accessed 1,080,000Rwf (US$ 1,542.85), 9 farmers from BNRT accessed 91,500 Rwf (US$ 130.71), from SACCOS and Kafuko cooperative received 14,000,0000 Rwf (US$ 20,000) from BRP to purchase a truck for transporting milk, all from Nyagatare. In Gatsibo , 121 farmers accessed 12,000,000Rwf (US$ 17,142.85), while Kibondo farmers' cooperative raised 33,000,000 Rwf (US$ 47,142.85) from their own contributions to purchase truck for transporting milk and Dufaco cooperative, located in Rwamagana District, borrowed 10m from CogeBank to buy a truck for transporting milk.

In Kigali milk shed, Blessed Dairy from Gicumbi borrowed 140,000,000 Rwf (US$ 200,000) from BPR to buy refrigerated and insulated tanks for transporting milk and dairy products, and purchase other dairy equipment such as butter churn and milk testing tools. In the same milk shed, five farmers from Gasabo borrowed 5M from Saccos and 18 farmers accessed 9,600,000 Rwf (US$ 13,714.28) from Saccos in Bugesera District.

In conclusion, there is a general improvement in dairy investments compared to last quarter. Some districts such as Bugesera, Gasabo, Rulindo and Kamonyi that haven't been reporting any investments have started to report. The project team will aim to engage Banks and MFIs and dairy actors to continue investing and also keep tracking and reporting the progress that's taking place.

Gender Mainstreaming

As in previous quarters, gender mainstreaming was implemented across all project activities.

As observed below, model farmer trainings held at village level attracted more female farmers. While there has been an improvement in the coverage of gender in training of farmers by model farmers, unfortunately, gender mainstreaming is still one of the least discussed

Figure17: Female and male model farmers attending a refresher and additional best practices training session in Kicukiro District

topics as seen in IR.1 section. In order to give more focus on gender mainstreaming in dairy farming, at village level training, RDCP II has re-emphasized the importance of gender through refresher training of model farmers during the distribution of best practice kits a and materials.

Participation of females in program trainings during the last quarter was 34% compared to 49% in quarter one. In an effort to increase the participation of women in the project activities, more female model farmers estimated at 41% were selected for the upcoming model farmers training set to commence in May 2015. This will contribute to increased female participation at village level trainings in the upcoming quarters. However, it's good to mention that female participation in the overall program activities is estimated at 74% considering mixed gender households participating in the program.

Regarding jobs creation, 17% of jobs created in the dairy value chains such as at MCC level, transporters, processors, input suppliers were accessed by women; jobs created at farm level accessed by women were just 1% as this continues to be a male dominated domain.

This quarter, Dairy Sector Working Group (DSWG) meetings were convened across all the four milk sheds. More women than in the past participated in these meetings (refer to table above). The women at these meetings actively participated in discussions and brought to the fore dairy sector gender issues. As reported in the business section of this report, RDCP II female beneficiaries have continued to access loans from SACCOs and their cooperatives. These loans are for school fees, medical bills and domestic expenses. In fact, women are now buying and owning cows which used to be a male dominated practice. This shows change in gender perception is improving both on the side of men as well as women.

Under its Milk Consumption Campaign, RDCP II developed illustrations promoting milk consumption for improved health and nutrition for mothers and children. The illustrations raise awareness that nutrition in the household is a joint female and male responsibility. This is consistent with the concept of dual gender decision making and gender inclusiveness.

Ag-Pro short term consultants have been working with RDCP II beneficiary cooperatives to improve their performance on gender mainstreaming. The results from the consultants work in this regard will be reported in the next quarter.

Grants and Grant Monitoring

NO.	Organization	District
1.	Cooperative des Eleveurs de Kayenzi (COOPEKA)	Kamonyi
2.	Cooperative Uruhimbi Rwizihiye Rukoma	Kamonyi
3.	Cooperative Amizero y'Aborozi	Kamonyi
4.	Cooperative Giramata Mworozi	Nyanza
5.	Cooperative Gwizumukamo Busoro	Nyanza
6.	Cooperative y'Aborozi Ba Ndego (COABONDE)	Kayonza
7.	Mubari Farmers Cooperative Society (MUFCOS)	Kayonza
8.	Rwimbogo Dairy Cooperative (RDC)	Gatsibo
9.	Kibondo Farmers Cooperative (KFC)	Gatsibo
10.	Cooperative Agiragitereka	Musanze
11.	Cooperative Bwera Ntoma Rutungu Tworore (BNRT)	Nyagatare

Table 6: The list of grantees

During this quarter, RDCP II provided sub-awards to one MCC located in Rubavu district with the dairy and transportation equipment. RDCP II distributed nine tricycles to eight MCCs located in 6 districts as described in table above to facilitate in the improvement of milk logistics.

Subawards close-out and extension

Subaward agreement with Codecol ended in March 2015. Last quarter, RDCP II has given Codecol a subaward extension to give them opportunity to properly use their grant equipment and increase the volume of milk collected. This has been achieved and as a result, they increased the volume of milk collected which is now varying between 7,000 liters – 12,000 liters per month as oppose to milk collection of last year which was varying between 1,000 liters – 3,000 liters per month.

RDCP II extended by one month the subaward agreement with Hobas Ltd, a service provider to give them more time to finalize Pregnancy Diagnosis.

During the quarter three large grant proposals were prepared and submitted to RDCP II for review and approval before submission to USAID. These included proposals from RALIS to initiate monitoring, auditing and certification of best practices of SME's handling milk along the dairy value chain. Primary targets for this exercise will be MCC's, milk transporters and milk kiosks/outlets. RNDP requested a capacity building grant and one which will initiate their activities and increase their visibility across all milk sheds. The third proposal was from Urunana a local NGO involved in radio drama. The proposal request is to develop a yearlong radio drama story line to promote awareness of nutritional benefits of consuming milk.

Presently property title under Land O' Lakes cooperative agreement for RDCP II states that all equipment purchased ultimately belongs to Government of Rwanda and the project's line ministry in this case MINAGRI. RDCP II has discussed with USAID if this clause can be modified to allow equipment to be passed directly to project beneficiaries. USAID has requested that this modification be communicated directly so that it may be amend. If approved this change would streamline disposition of goods to project beneficiaries.

Environmental Compliance

Three RDCP II staff attended a three day training organized by USAID for USAID & Implementing Partners' staff. The training started on March 30 and ended on April 1.

The overall goal of the training was to strengthen environmentally sound design and management (ESDM) of USAID-funded activities in Rwanda by assuring that participants have the motivation, knowledge and skills necessary to:

- Achieve environmental compliance through project implementation; and
- Otherwise integrate environmental considerations in activity design and management to improve overall project acceptance and sustainability,
- Ensure that periodic environmental compliance updates and or reports are shared.

The RDCP II team is expected to engage project staff and partners to mainstream environmental compliance into the program activities.

Monitoring & Evaluation and Knowledge Management

The major highlight of quarter II for M&E department was the Mid Term Evaluation carried out by Development and Training Services, Inc. (dTS) during the period of February 21-March 29, 2015. The Evaluation covered the 4 Milk Sheds of the RDCP II operational area. The draft report of the evaluation was shared by the team. The final report is not yet available but initial feedback was positive.

Also during the quarter, the USAID AOR carried out a field visit in Southern Milk Shed in preparation of US Ambassador visit to Program Activities and also as part of regular Quarterly site visit to the program. Activities visited by AOR are Service Providers grantees (training, AI, etc...), Model Farmers (training, cattle forage), MCC Management (milk quality control technologies and process, record keeping, coop general management.)

Jim Yazman, the Livestock Sciences specialist for the United States Agency for International Development (USAID) Bureau of Food Security visited the program activities and shared with the team lessons learnt during his visit. His visit coincided with the MTE evaluation team and JY spent time in the field during the evaluation process.

During the quarter, RDCP II conducted a semi-annual farmer survey in 4 milk sheds. 473 farmers were reached. The results of the Survey are integrated into this quarterly report. Household survey will be carried out every 6 months as agreed with the Donor with the aim of improving the quality and reliability of data collected from beneficiary dairy farmers. RDCP II M&E support was strengthened though recruitment of an additional M& E staff member.

As part of the process of finalizing target setting for years 2015 and 2016, all targets set in collaboration with the program AOR were integrated in into FTFMS and AIDTracker systems.

Concerning reporting process, on quarterly basis RDCP II continued to report results through **AIDTracker** and TRAINET **systems**. In addition during the last quarter, RDCP II submitted the annual report for 2014 Microenterprise Results Reporting (**MRR**).

Finally, the last quarter was a period of District Partners' Performance Contracts implementation review and update. Districts JADF teams reviewed partners progress in achieving 2014/2015 performance contracts commitments. Field visit by JADF teams were conducted in RDCP II operation area in various milk sheds and progress reports were submitted to the Districts covered by the program. Observations and recommendations that came out of the JADF evaluation exercise will be followed up by the M&E Department in collaboration with field teams in respective Districts to make sure the program commitment towards Government Decentralized entities (Districts) are fulfilled before the end of June 2015 (end of GOR fiscal year).

Annexes

A: FTFMS Table

B: Success Story – Flying High: Blessed Dairies lands supply deal with national airline carrier

C: Mastitis Workshop Agenda

D: Feed Report

E: Communication Campaigns Sustainability Plan

Annex A: FTFMS Table

Indicator / Disaggregation	Baseline Value	2015 Target	2015 Results				2015 Annual Achievement	Cumulative Achievement for all previous years
			Quarter 1 Oct-Dec 2014	Quarter 2 Jan-Mar 2015	Quarter 3 Apr-Jun 2015	Quarter 4 July-Sept 2015		
4.5(2): Number of jobs attributed to FTF	**0**	**11,652**	**9,191**	**9,592**	**0**	**0**	**9,592**	**9,592**
Location		**11,652**	**9,191**	**9,592**	**0**	**0**	**9,592**	**9,592**
Urban	0	0	0	0	0	0	0	0
Rural	0	11,652	9,191	**9,592**	0	0	9,592	9,592
Disaggregates Not Available	0	0	0	0	0	0	0	**0**
New/Continuing		**11,652**	**9,191**	**9,592**	0	0	9,592	9,592
New	0	2,500	39	401	0	0	440	440
Continuing	0	9,152	9,152	9,191	0	0	9,191	9,191
Disaggregates Not Available	0	0	0	0	0	0	0	0
Sex of job-holder		**11,652**	**9,191**	**9,592**	0	0	**9,592**	**9,592**
Male	0	9,914	8,429	8,821	0	0	8,821	8,821
Female	0	1,738	762	771	0	0	771	771
Disaggregates Not Available	0	0	**0**	0	0	0	0	0
4.5(10): Total increase in installed storage capacity (m3)	**0**	**50**	**8**	**2**	**0**	**0**	**10**	**68.50**
Dry storage	0	0	0	0	0	0	0	**0**
Cold storage	0	50	**8**	2	0	0	**10**	**68.50**
Disaggregates Not Available	0	0	0	0	0	0	0	**0**
4.5.2(5): Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	**0**	**14,000**	**1,125**	**4,648**	**0**	**0**	**5,773**	**21,195**
New/Continuing	0	14,000	1,125	4,648	0	0	**5,773**	**21,195**
New	0		1,125	4,648	0	0	5,773	**16,408**
Continuing	0		0	0	0	0	0	4,787
Disaggregates Not Available	0		0	0	0	0	0	0
Sex	**0**		**1,125**	**4,648**	0	0	**5,773**	**21,195**
Male	0	10,000	847	3,021	0	0	3,868	13,617
Female	0	4,000	278	1,627	0	0	1,905	7,578
Disaggregates Not Available	0	0	0	0	0	0	0	0
4.5.2(7): Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	**0**	**18,000**	**2,341**	**3,490**	**0**	**0**	**5,831**	**30,385**
Type of individual	0	**18,000**	**2,341**	**3,490**	**0**	**0**	**5,831**	**30,385**
Producers	0	17,650	1,653	2,488	0	0	4,141	27,907
People in government	0	300	0	76	0	0	76	195
People in private sector firms	0	50	688	923	0	0	1,611	2,278
People in civil society	0	0	0	3	0	0	3	5

Disaggregates Not Available	0	0	0	0	0	0	0	0
Sex	0	**18,000**	**2,341**	**3,490**	0	0	**5,831**	**30,385**
Male	0	12,000	1,193	2,313	0	0	3,506	19,439
Female	0	6,000	1,148	1,177	0	0	2,325	10,946
Disaggregates Not Available	0	0	0	0	0	0	0	0
4.5.2(13): Number of rural households benefiting directly from USG interventions	**0**	**34,532**	**26,855**	**30,345**	**0**	**0**	**30,345**	**30,345.00**
New/Continuing	0	**34,532**	**26,855**	**30,345**	**0**	**0**	**30,345**	**30,345**
New	0	10,000	2,323	3,490	0	0	5,813	**5,813**
Continuing	0	24,532	24,532	26,855	0	0	24,532	**24,532**
Disaggregates Not Available	0	0	0	0	0	0	0	**0**
Gendered Household Type	0	**34,532**	**26,855**	**30,345**	**0**	**0**	**30,345**	**30,345**
Adult Female no Adult Male (FNM)	0	6,362	4,520	5,142	0	0	5,142	4,520
Adult Male no Adult Female (MNF)	0	3,362	2,388	2,701	0	0	2,701	2,388
Male and Female Adults (M&F)	0	24,808	19,765	22,320	0	0	22,320	22,320
Child No Adults (CNA)	0	0	182	182	0	0	182	182
Disaggregates Not Available	0	0	0		0	0	**0**	
4.5.2(14): Number of vulnerable households benefiting directly from USG interventions	**0**	**13,152**	**9,979**	**11,494**	**0**	**0**	**11,494**	**11,494**
New/Continuing	0	**13,152**	**9,979**	**11,494**	**0**	**0**	**11,494**	**11,494**
New	0	4,000	827	1,515	0	0	1,515	1,515
Continuing	0	9,152	9,152	9,979	0	0	9,979	9,979
Disaggregates Not Available	0	0	0	0	0	0	0	0
Gendered Household Type	0	**13,152**	**9,979**	**11,494**	**0**	**0**	**11,494**	**11,494**
Adult Female no Adult Male (FNM)	0	3,683	2,506	2,786	0	0	2,786	2,786
Adult Male no Adult Female (MNF)	0	882	614	746	0	0	746	746
Male and Female Adults (M&F)	0	8,587	6,777	7,880	0	0	7,880	7,880
Child No Adults (CNA)	0	0	82	82	0	0	82	82
Disaggregates Not Available	0	0	0		0	0	0	0
4.5.2(23): Value of incremental sales (collected at farm-level) attributed to FTF implementation	**$4,606,135.00**	**$26,253,821.40**	**$0.00**	**$ 3,180,598.65**	**$0.00**	**$0.00**	**$3,180,598.65**	**31,651,822**

FTF 4.5-4 : Gross margin per dairy cow	**$162.22**	**$220.44**	**$0.00**	**$149.69**	**$0.00**	**$0.00**	**$149.69**	**$185.96**
4.5.2(27): Number of members of producer organizations and community based organizations receiving USG assistance	**0**	**4000**	**192**	**1,758**	**0**	**0**	**1,950**	**20,307**
Type of organization	0		0	0	0	0	0	0
Producer organization	0	4,000	192	1,758	0	0	1,950	20,306
Non-producer-organization CBO	0	0	0	0	0	0	0	1
Disaggregates Not Available	0	0	0	0	0	0	0	0
Sex	0	**4,000**	**192**	**1,758**	**0**	**0**	**1,950**	**20,307**
Male	0	3,000	99	1,287	0	0	1,386	12,832
Female	0	1,000	93	471	0	0	564	7,475
Disaggregates Not Available	0		0	0	0	0	0	0
4.5.2(28): Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied new technologies or management practicies as a result of USG assistance	**0**	**904**	**819**	**897**	**0**	**0**	**897**	**897**
Type of organization	0		**819**	**897**	**0**	**0**	**897**	**897**
Private enterprises (for profit)	0	773	601	646	0	0	646	646
Producers organizations	0	103	111	141		0	141	141
Water users associations	0	1	1	1		0	1	1
Women's groups	0	2	2	3		0	3	3
Trade and business associations	0	21	101	103		0	103	103
Community-based organizations (CBOs)	0	4	3	3		0	3	3
Disaggregates Not Available	0	0	0	0	0	0	0	0
New/Continuing	0	**904**	**819**	**897**	**0**	**0**	**897**	**897**
New	0	150	65	78	0	0	78	78
Continuing	0	754	754	819	0	0	819	819
Disaggregates Not Available	0		0	0	0	0	0	0

4.5.2(29): Value of Agricultural and Rural Loans	**$0.00**	**$700,000.00**	**$61,901.15**	**$348,621.00**	**$0.00**	**$0.00**	**$410,522**	**$1,040,390**
Type of loan recipient	0	**700,000**	**61,901**	**348,621**	**0**	**0**	**410,522**	**1,040,390**
Producers	0	200,000	41,716	64,847	0	0	106,563	311,715
Local traders / assemblers	0	280,000	13,592	83,774	0	0	97,366	357,534
Wholesalers/processors	0	200,000	6,594	200,000	0	0	206,594	360,699
Others	0	20,000	0	0	0	0	0	10,442
Disaggregates Not Available	0	0	0	0	0	0	0	0
Sex of recipient	0	**700,000**	**61,901**	**348,621**	**0**	**0**	**410,522**	**1,040,390**
Male	0	400,000	34,216	59,096	0	0	93,312	421,244
Female	0	100,000	7,500	39,752	0	0	47,252	70,464
Joint	0	200,000	20,185	249,773	0	0	269,958	548,682
n/a	0	0	0	0	0	0	0	0
Disaggregates Not Available	0	0	0	0	0	0	0	0
4.5.2(36): Value of exports of targeted agricultural commodities as a result of USG assistance (for bilateral missions)	**$85,979.00**	**$16,411,626.00**	**$0.00**	**$ -**	**$0.00**	**$0.00**	**$0.00**	**$22,016,489.69**
4.5.2(37): Number of MSMEs, including farmers, receiving business development services from USG assisted sources	**0**	**5,000**	**65**	**78**	**0**	**0**	**143**	**6,621**
Size of MSME	**0**	**5,000**	**65**	**78**	**0**	**0**	**143**	**6,621**
Micro	0	4,900	38	72	0	0	110	6,449
Small	0	80	23	6	0	0	29	160
Medium	0	20	4	0	0	0	4	12
Disaggregates Not Available	0	0	0	0	0	0	0	0
MSME Type	0	**5,000**	**65**	**78**	**0**	**0**	**143**	**6,621**
Agricultural producer	0	4,900	5	30	0	0	35	5,715
Input supplier	0	0	10	0	0	0	10	63
Trader	0	80	37	37	0	0	74	674
Output processors	0	20	12	11	0	0	23	135
Non agriculture	0	0	1	0	0	0	1	33
Other	0	0	0	0	0	0	0	1
Disaggregates Not Available	0	0		0	0	0	0	0
Sex of owner	0	**5000**	**65**	**78**	0	0	**143**	**6,621**
Male	0	3,200	34	59	0	0	93	3,976
Female	0	1,800	21	14	0	0	35	2,391
Joint	0	0	10	5	0	0	15	254
n/a	0	0	0	0	0	0	0	0
Disaggregates Not Available	0	0	0	0	0	0	0	**0**

FTF Indicator 4.5.2-38: Value of new private sector investment in the dairy sector or food chain leveraged by FTF Implementation	**$0.00**	**$5,000,000.00**	**$399,548.63**	**$ 395,763.00**	**$0.00**	**$0.00**	**$795,311.63**	**$3,301,671.43**
4.5.1(24): Numbers of Policies/Regulations/Administrative Procedures in each of the following stages of development as a result of USG assistance in each case: (Stage 1/2/3/4/5)	**0**	**2**	**1**	**1**	**0**	**0**	**2**	**7**
Sector	0	**2**	**1**	**1**	0	0	2	**7**
Inputs	0	0	0	0	0	0	0	0
Outputs	0	0	0	0	0	0	0	0
Macroeconomic	0	0	0	0	0	0	0	0
Agricultural sector-wide	0	2	1	1	0	0	2	7
Research, extension, information, and other public service	0	0	0	0	0	0	0	0
Food security/vulnerable	0	0	0	0	0	0	0	0
Climate change adaptation or natural resource management (NRM) (ag-related)	0	0	0	0	0	0	0	0
Disaggregates Not Available	0	1	0	0	0	0	0	0
Stages of development	**0**	**2**	**1**	**1**	0	0	**2**	**7**
Stage 1 of 5 Number of policies / regulations / adminitstrative procedures analyzed	0	2	0	0	0	0	0	2
Stage 2 of 5 Number of policies / regulations / adminitstrative procedures drafted and presented for public/stakeholder consultation	0	0	0	0	0	0	0	1
Stage 3 of 5 Number of policies / regulations / adminitstrative procedures presented for legislation/decree	0	0	0	0	0	0	0	2
Stage 4 of 5 Number of policies / regulations / adminitstrative procedures prepared with USG assistance passed/approved	0	0	1	1	0	0	2	2

Stage 5 of 5 Number of policies / regulations / adminitstrative procedures passed for which implementation has begun	0	0	0	0	0	0	0	0
Disaggregates Not Available	0	0	0	0	0	0	0	0
First name	Last name							
Indicator / Disaggregation	**Baseline Value**	**2015 Target**	**2015 Results**				**2015 Annual Achievement**	**Cumulative Achievement for all previous years**
			Quarter 1 Oct-Dec 2014	**Quarter 2 Jan-Mar 2015**	**Quarter 3 Apr-Jun 2015**	**Quarter 4 July-Sept 2015**		
Custom Indictor 1 a : Volume of milk marketed by Milk Collection Centers (in Liters)	**16,067,127**	**22,493,978**	**10,678,505**	**11,377,640**	**0**	**0**	**22,056,145**	**83,795,853**
Custom Indictor 1.1.1 a: Value of inputs and services used by members of targeted cooperatives (USD)	**$1,782,168.68**	**$6,137,115.69**	**$0.00**	**$ 1,120,950.86**	**$0.00**	**$0.00**	**$1,120,950.86**	**$7,361,364.76**
Custom Indictor (a): Change in net dairy income among targeted households(in USD)	**$2,823,967.12**	**$8,626,750.39**	**$0.00**	**$ 4,002,530.79**	**$0.00**	**$0.00**	**$4,002,530.79**	**$14,668,998.27**
Custom Indictor 1.2 a: Number of new milk quality assessment technologies\protocols adapted\implemented	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**5**
Custom Indictor 1.3 a: Number of new products awarded SOQ	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**19**
Custom Indictor 1.3 b: Percentage of milk marketed under SOQ	**0**	**20%**	**56%**	**65%**		**0**	**65%**	**65%**

Custom Indictor 2.1 a: Number of dairy related firms and organizations newly aligned within and provided a voice by dairy sector affinity organizations	0	70	0	0	0	0	0	70
Custom Indictor 2.2 a : Number of dairy enterprises with upgraded production facilities resulting from successful financing applications		600	0		0	0	0	72
Custom Indictor 2.2 b : Liters of additional daily milk processing resulting from financing assisted by RDCP II	0	30,000	73,622	81,794	0	0	155,416	61,871
Number of promotional and educational events/program on dairy consumption implemented/conducted	0	10	0	0	0	0	0	11
Number of people reached during the milk consumption promotional campaign	0	200,000	-	0	0	0	0	200,000
Percentage of consumers that are aware of nutritional and health benefits of milk	0	50%	0	0	0	0	0	0
GNDR-2 : Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)	0	50%	49.2%	34%	0	0	40%	36%

GNDR-3 : Proportion of females who report increased self-efficacy at the conclusion of USG supported training/programming	**0**	**80%**	**0**	**0**	**0**	**0**	**0**	**76%**
GNDR-4 : Proportion of target population reporting increased agreement with the concept that males and females should have equal access to social, economic, and political opportunities	**0**	**80%**	**0**	**0**	**0**	**0**	**0**	**84%**

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SNAPSHOT

Flying High – Blessed Dairies lands supply deal with national airline carrier

Blessed Dairies' yogurt became a prominent component of RwandAir's in-flight meal service beginning in March 2015

"From a business expansion standpoint, displaying my brand aboard RwandAir carries more significance than the revenue we are getting from the airline company. It gives us more than that, which is a great promotional platform to grow our brand even beyond Rwanda," said Blessed Dairies' owner Mr. Milton Ngirente

Figure 1: Blessed Dairies employs a skilled workforce of 44 staff to ensure the business' steady growth

Considering Blessed Dairies' initial struggles to establish its nascent yogurt business in 2012, the company's owner still marvels that only 3 years later, his company's brand has become the dairy company of choice aboard the nation's largest airline carrier, RwandAir.

But through Blessed Dairies, Ltd.'s recent deal with a Nigerian in-flight catering company (AASL, Ltd.), they are now supplying yogurt, fresh cream and mozzarella cheese aboard RwandAir's 18 routes, spanning Central Africa, East Africa, West Africa, and the Middle East.

Blessed Dairies' owner Milton Ngirente, 41, started off as a dairy farmer in Northern Rwanda's remote district of Gicumbi. After recognizing his business acumen, Milton ventured into milk transportation and marketing in 2004. From that time until 2012, his business just focused on buying milk from rural farmers and selling it to retail outlets and to Inyange Industries, a large processor based in the capital of in Kigali. Unable to sell all the fresh milk due to a milk surplus, he decided to begin his own processing unit that would pasteurize milk, and process yogurt, fresh cream and mozzarella cheese.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

“We encountered business losses, and it was also disheartening to see disappointed dairy farmers, whose milk was dumped due to a lack of a market. To create a reliable market for dairy farmers and absorb milk surpluses, I decided to venture into processing dairy products with a relatively longer shelf life,” he explained.

Figure 2: Blessed Dairies collects milk from 8,000 farmers through transporters and milk collection centers run by cooperatives

When the company first started processing in 2012, 1,000 liters of milk was allocated to production each day. As the market demand has increased over the years, they have now grown to a stunning 3,000 liters processed per day. What’s more, this expanded capacity has resulted in new jobs: Blessed Dairies had 15 staff running its processing unit in 2012, which has now grown to 44 permanent staff in 2015.

Beyond this direct job creation at Blessed Dairies, a study by SNV/Rwanda estimates that 50 jobs are created for every 1,000 liters of milk that goes through the dairy value chain between on-farm jobs and in milk transportation.

Milton attributes his business’ success in large part to its collaboration with the Rwanda Dairy Competitiveness Program II (RDCP II), a project funded by USAID and implemented by Land O’Lakes International Development. Through the program’s technical support, Blessed Dairies became the first Rwandan dairy processor to secure Hazard Analysis and Critical Control Point (HACCP) certification in 2014 – a fact which undoubtedly made the company a more attractive partner to RwandAir.

In addition to this food safety HACCP training, RDCP II technical support also included providing the company with an insulated 8,000 liter milk transportation tank, milk testing kits, and training in food safety, cheese production and butter-making.

In 2013, RDCP II also sponsored Milton and other dairy Rwandan stakeholders to attend the East and Southern Africa Dairy Association (ESADA) conference in Zimbabwe, where they were exposed to modern dairy sector technologies and partnerships. As a result of this visit, Milton secured more knowledge on dairy processing technologies, and established business contacts with dairy processing equipment manufacturers.

As a result, in 2014 and 2015 Milton invested US $150,000 in the purchase of modern processing equipment, including six cooling tanks, a batch pasteurizer, a second mobile insulated tank, and anautomatic filling and sealing machine for yoghurt production.

In addition to processing, Milton's company now collects milk from 8,000 dairy farmers and supplies 30,000 liters of milk every day to the country's largest processor, Inyange Industries.

With the new deal in place with RwandAir, Blessed Dairies is now supplying 600 yogurt cups, 30 kilograms of fresh cream and 7 kilograms of mozzarella cheese to RwandAir each week.

In the past three months, sales to the airline have generated a gross revenue US $6,200, on top of the $62,000 they're generating each month from sales to the hospitality and retail sectors in Kigali and populous towns including Musanze, Rubavu, Rusizi, Rwamagana and Huye.

Beyond the numbers, Milton recognizes that there many other less quantifiable benefits that come from selling Blessed Dairies' products

to the national airline carrier, and he believes it will open up additional opportunities from the high-end and export markets. “From a business expansion standpoint, displaying my brand aboard RwandAir carries more significance than the revenue we are getting from the airline company. It gives us more than that, which is a great promotional platform to grow our brand even beyond Rwanda,” he said with pride.

When asked about his future plans he looked upwards and said, “The skies the limit!” By May 2015, they also expect to start producing butter for the local market and to export to Uganda, Kenya and Burundi.

BUILDING A ROADMAP FOR MASTITIS PREVENTION AND CONTROL

The Role Of Public And Private Sector Institutions

FIRST RWANDA NATIONAL MASTITIS WORKSHOP

FEB 24-26, 2015
NOBLEZA HOTEL
KIGALI, RWANDA

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LAND O'LAKES, INC. INTERNATIONAL DEVELOPMENT
Innovative Solutions for Global Prosperity

ABS

RAB

Rwanda Dairy Competitiveness Program II

February 24-26, 2015

Nobleza Hotel

Kigali, Rwanda

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INTRODUCTION

Mastitis is one of the most important diseases and is detrimental to the health of the dairy industry. Mastitis in dairy cows causes production losses and reduces milk quality, and as a consequence, contributes to negative outcomes felt along the rest of the dairy supply chain

Mastitis is the inflammation of mammary gland and udder tissue. It is a major endemic disease of dairy cattle in the world. It usually occurs as an immune response to bacterial invasion of the udder through the teat canal. Mastitis can also occur as a result of chemical, mechanical, or thermal injury to the cow's udder. It is most often transmitted through defective milking machines, and through contaminated hands or other materials in housing, bedding and other equipment. Mastitis is a costly disease to the dairy industry.

Losses due to mastitis include the following:

- Milk thrown away/discarded due to contamination by medication or being unfit for human consumption
- A reduction in milk yield due to illness and damage to udder tissue
- The extra labor required to attend to cows with mastitis
- The costs of veterinary care and medicines
- The cost of reduced longevity due to premature culling.

RATIONALE

Cattle mastitis is one of the major diseases which cost the most to society. Cows with mastitis underproduce milk, and the milk they produce can be unsalable due to high bacterial counts. Cows will have signs of mild infertility, ill heath, partial or total obstruction of mammary glands, and have increased culling likelihood. The low productivity of dairy cows ultimately leads to less profitability.

A well-planned mastitis control program can have a high impact on profitability. There are recommended mastitis prevention and control strategies which can minimize the impact of mastitis, even in the limited resource smallholder farming systems of Rwanda.

Mastitis control is based upon adoption of preventative and control strategies including good milking hygiene, teat dipping with disinfectants, dry cow therapy, the use of properly functioning milking equipment, provision of clean and dry housing areas, and proper identification and treatment of cows that are infected with subclinical and clinical mastitis. Rwanda has a population of over eleven million people and is one of the most densely populated countries in Africa. Its emerging livestock industry offers considerable potential for continued growth in the near future.

Milk spoilage and low quality milk are of special concern to developing countries including Rwanda, where cold chains are unreliable and breaks in the chain allow the bacteria to grow quickly to reach unsafe levels. The resulting decrease in quality milk supply negatively impacts each link in the dairy supply chain.

Improved milk quality and food safety begin on the farm. The presence of well-trained personnel in herd management and clinical milk microbiology will complement and enhance the impact on the safe dairy product that has been tested and successfully implemented in other developed and developing countries. A network of efficient extension personnel, clinical laboratories and practices that can do reliable, accurate mastitis diagnosis with a 24-48 hour turnaround time for reporting results is currently limited in Rwanda, particularly in rural areas.

Rwanda's first workshop, dedicated to mastitis control and prevention, will emphasize the importance of training in animal health, food safety, food security, and cost-benefit scenario for the smallholder farmer. This approach allows us to combine collaborative efforts from public and private sector entities, regulatory agencies and producers.

MAIN OBJECTIVES OF THE WORKSHOP

To highlight the importance of mastitis in animal health and food safety and to build a road map for mastitis testing, prevention and control in Rwanda dairy herds. This will be accomplished through close collaboration between public sector institutions and the private sector.

Specifically, this will be achieved through engagement of stakeholders including policymakers and subsequent brainstorming sessions to ensure that all stakeholders are on same page for the intended purpose.

EXPECTED OUTPUTS AND OUTCOMES

- A well-structured roadmap for the control and prevention of mastitis in dairy cattle herds of Rwanda will be elaborated and adopted by

public and private stakeholders for implementation.

- Stakeholders in the dairy value chain will gain knowledge and skills appropriate for the control and prevention of mastitis.
- Policy makers will be enlightened on the current prevalence and economic impact of mastitis infection in the dairy industry of Rwanda.
- The University of Rwanda's role in conducting research on livestock diseases of economic importance in the country will be highlighted and its contribution to future research will be defined.
- Rwanda Agricultural Board will take on board resolutions and recommendations developed thereafter for its future plans geared towards establishing appropriate control and preventive measures for mastitis in dairy herds.
- Stakeholders in the dairy value chain will be challenged to be totally involved in the development and implementation of programs aimed at controlling and preventing mastitis in the country.
- Various materials and tools for teaching farmers and other stakeholders in the control and prevention of mastitis will be displayed.
- In relation to mastitis, dairy products safety and quality control standards will be reviewed and appropriate recommendations to reinforce existing or proposed laws and regulations proffered.

WORKSHOP ORGANIZERS:

- Rwanda Agricultural Board (RAB)
- Rwanda National Dairy Platform (RNDP)
- University of Rwanda College of Agriculture, Animal Science and Veterinary Medicine.
- Rwanda Dairy Competitiveness Program II (RDCP II)
- Global HealthShare® initiative, University of California, Davis, USA

ORGANIZING COMMITTEE:

- Dr. John Musemakweli
- Dr. Savino Biryomumaisho

- Dr. J.P. Muganga
- Ms. Florence Musiime Umurungi
- Mr. Frank O'Brien
- Dr. Denis Karamuzi
- Dr. James Cullor
- Dr. Somen Nandi

WORKSHOP FACILITATOR:

Dr. John B. Musemakweli

SPEAKERS:

- Dr. Somen Nandi, University of California, Davis, USA
- Dr. James Cullor, University of California, Davis, USA
- Dr. Nathaniel Makoni, ABSTCM Ltd, Nairobi, Kenya
- Dr. David Lee, Rutgers University, Member of National Mastitis Council, USA.
- Dr. Vestina Musanayire, Rwanda Agricultural Board (RAB).
- Dr. Nyiramugisha Saphine: A private veterinary Practitioner in Muhanga District.
- Dr. Jean Baptiste Ndahetuye, University of Rwanda (UR), Busogo.
- Dr. Emmanuel Bizimana: Private veterinary practitioner-Kigali.
- Dr. Pie Ntampaka, University of Rwanda (UR) Nyagatare.
- Dr. Spridio Niyodusenga, Veterinarian at Agrotech Company-Kigali.
- Dr. Blaise Iraguha, Rwanda Dairy Competitiveness Program II (RDCP II).
- Dr. JP Muganaga, University of Rwanda (UR) Busogo.
- Dr. Gafarasi Isidory, Rwanda Agricultural Board (RAB).
- Ms. Beatrice Uwumukiza-Director General, Rwanda Agricultural Livestock Inspection Service (RALIS).

WORKSHOP AGENDA

Day 1:

Mastitis in the Rwandan Context

Wednesday, Feb 24th, 2015

Time	Activity/Topic	Responsible	Session Chairperson
08.00-08.45	Arrival and registration of participants	Workshop Secretariat	Facilitator
08.45-09.30	Official Opening of Scientific Session	Facilitator	Opening remarks by: Dr. Somen Nandi, Prof. James Cullor, Dr. Christine Kanyandekwe, Deputy Director General, Rwanda Agricultural Board (RAB), Dr. Leatitia Nyinawamwiza, Principal, College of Agric. Animal Science & Veterinary medicine, University of Rwanda (UR), Official opening of the Scientific Session by the Vice Chancellor University of Rwanda (UR), Prof. James McWha
09.30-09.45	Dairy Break / Exhibition	All	Facilitator
Scientific Session 1			
Time	**Activity/Topic**	**Responsible**	**Session Chairperson**
09.45-10.00	Characterization of subclinical mastitis in Nyagatare District (a case study)	Ms. Vestina Musanayire, RAB	Dr. Laetitia, Nyinawamwiza Principal, University of Rwanda (UR),
10.00-10.15	The prevalence of subclinical mastitis, mastitogenic bacteria and their risk factors in dairy cattle in Nyanza district (a case study).	Dr. Nyiramugisha Saphine: A private veterinary Practitioner in Muhanga District	Dr. Laetitia, Nyinawamwiza Principal, University of Rwanda (UR),
10.15-10.30	Molecular epidemiology of bacteria that cause mastitis disease in dairy cattle in Rwanda.	Dr. Jean Baptiste Ndahetuye, UR, Busogo	Dr. Laetitia Nyinawamwiza, Principal, UR
10.30-10.45	Isolation rate and antimicrobial susceptibility pattern of bovine subclinical mastitis in Kicukiro district-Kigali City	Dr.Emmanuel Bizimana: Private veterinary practitioner-Kigali	Dr. Rutagwenda Theogene, Director General, Livestock, MINAGRI
10.30-11.15	Discussion (Q&A)	Presenters	Dr. Rutagwenda Theogene, Director General, Livestock, MINAGRI
11.15-11.30	In-vitro susceptibility of sub-clinical mastitis bacteria identified at Masaka dairy farms to different antibiotics available in local drug stores	Dr. Pie Ntampaka, UR, Nyagatare	Dr. Rutagwenda Theogene, Director General, Livestock, MINAGRI
	Earlier diagnosis of	Dr. Spridio	Dr. Rutagwenda Theogene,

11.30-11.45	sub-clinical mastitis and pathogens identification in dairy farms	Niyodusenga, Veterinarian at Agrotech Company-Kigali	Director General, Livestock, MINAGRI
11.45-12.00	Bovine mastitis prevalence and associated risk factors in dairy cows in Nyagatare district	Dr. Blaise Iraguha, RDCI II	Dr. Rutagwenda Theogene, Director General, Livestock, MINAGRI
12.00-12.45	Discussion (Q&A)	Presenters	Dr. Rutagwenda Theogene, Director General, Livestock, MINAGRI
12.45-14.00	Lunch break	All	Facilitator
Scientific Session 2			
Time	**Activity/Topic**	**Responsible**	**Session Chairperson**
14.00-14.30	DDM Program Approach. Results and Key Findings of the Mastitis study	Dr. Somen Nandi, UC, Davis	Prof. JJ Mbonigaba, Director General, Rwanda Agricultural Board
14.30-14.45	DDM Survey presentation	Dr. JP Muganaga, UR, Busogo	Prof. JJ Mbonigaba, Director General, Rwanda Agricultural Board
	DDM Survey	Dr. Pai Ntampaka, UR,	Prof. JJ Mbonigaba, Director

14.45-15.00	presentation	Nyagatare	General, Rwanda Agricultural Board
15.00-16.00	General Discussion (Q&A)	Drs. Cullor and Nandi, UC, Davis	Prof. JJ Mbonigaba, Director General, Rwanda Agricultural Board
16.00-16.15	Diary break/Exhibition	All	Facilitator
16.15-16.30	Mastitis vaccination: The American experience, the technology involved and the possibility for technology transfer to Rwanda	Dr. James Cullor, UC, Davis	Dr. Christine Kanyandekwe, DDG, RAB
16.30-17.00	Discussions (Q&A)	Drs. Cullor & Nandi, UC, Davis	Dr. Christine Kanyandekwe, DDG, RAB
17.00-18.00	Open hour for discussion		

WORKSHOP AGENDA

Day 2:

Official Opening and Plenary Sessions

Thursday, Feb 25th, 2015

Time	Activity	Responsible	Remarks
08.00-08.30	Registration	Program Organizing secretariat	
08.30-09.30	Official Opening of the Conference	Facilitator	Remarks by Mr. Frank O'Brien, Chief of Party, RDCP II, Remarks by Prof. James Cullor, UC DAVIS, Remarks by Prof. JJ Mbonigaba, RAB, Official opening address by the Hon. Minister, Dr. MUKESHIMANA GERALDINE, Ministry of Agriculture and Animal Resources,
09.30-10.00	Dairy Break/exhibition	All	Facilitator

Plenary Session 1:

Theme: Policy and Economic Impact of Mastitis Infection in Rwanda

Time	Topic	Responsible	Chairperson of session
10.00-10.15	Mastitis testing, prevention and control interventions on dairy farms supplying milk to six Rwanda milk collection centers	Dr. Nathaniel Makoni	Dr. Laetitia, Principal, UR
10.15-10.30	The Current status of mastitis infection in dairy cattle herds of Rwanda	Dr. Gafarasi Isidory, RAB	Dr. Laetitia Nyinawamwiza, Principal, UR
10.30-11.00	DDM Program Approach. (Results and Key Findings of the Mastitis study	Dr. Somen Nandi, UC Davis	Dr. Laetitia Nyinawamwiza, Principal, UR
11.00-11.45	Discussion (Q&A)	Presenters	Dr. Laetitia Nyinawamwiza, Principal, UR
11.45-12.15	Cost-Benefit Ratio of Mastitis/ and Social & Economic Impact of Mastitis	Dr. James Cullor, UC, Davis	Dr. Christine Kanyandekwe, DDG, RAB
12.15-12.30	Ministerial Instructions on Milk handling & Hygiene	Ms. Beatrice Uwumukiza-Director General, Rwanda Agricultural Livestock Inspection Service (RALIS)	Dr. Christine Kanyandekwe, DDG, RAB
12.30-13.00	Discussion (Q&A)	Presenters	Dr. Christine Kanyandekwe, DDG, RAB
13.00-14.00	Lunch Break	All	Facilitator

Plenary Session 2

Theme: Next Steps and Bottlenecks

Time	Topic	Responsible	Chairperson of session
14.00-14.30	Next steps and the Bottlenecks	Dr. James Cullor, UC, Davis	Mr. Frank O'Brien, Chief of Party, RDCP II
14.30-15.00	Discussion (Q&A)	Dr. Laetitia Nyinawamwiza, Principal, UR	Mr. Frank O'Brien, Chief of Party, RDCP II
15.00-15.15	Health break/exhibition	All	Facilitator
15.15-16.30	Discussion (Q&A)	Dr. Rutagwenda, DG, Livestock	Mr. Frank O'Brien, Chief of Party, RDCP II
16.30-17.30	Open hour for discussion		

WORKSHOP AGENDA

Day 3:

Sustainability and the road forward

Friday, Feb 25th, 2015

Time	Topic	Responsible	Session chairperson
8.00-8.30	Arrival of participants	WS secretariat	Facilitator
8.30-8.45	The role and structure of the U.S.A National Mastitis Council	Dr. David Lee, Rutgers University, USA	Dr. Alphonse Nshimiyimana-Director animal production RAB
8.45-9.00	The way forward and Next Steps	Prof. JJ Mbonigaba, DG, RAB	Dr. Alphonse Nshimiyimana, , RAB
9.00-10.00	Group work on the way forward and next step	Prof. JJ Mbonigaba, DG, RAB	Dr. Alphonse Nshimiyimana, RAB
10.00-11.00	Group presentation and Discussion	Drs. Nandi & Cullor	Dr. Alphonse Nshimiyimana, RAB
11.00-11.15	Dairy Break	All	Facilitator
11.15-11.30	Presentation of Workshop resolutions and recommendations	Facilitator	Dr. Rutagwenda Theogene, DG, Livestock, MINAGRI

11.30-12.30	General discussion, elaboration of roadmap, adoption of workshop resolutions, and recommendations	Dr. Laetitia Nyinawamwiza, Principal, UR	Dr. Rutagwenda Theogene, DG, Livestock, MINAGRI
12.30-13.15	Official closing of the workshop	Facilitator	Concluding remarks by UCD team, Drs. Nandi & Cullor Concluding remarks by the Principal, CAS, UR, Dr. Laetitia Nyinawamwiza, Principal, UR Remarks by, Dr. Theogene Rutagwenda, DG, Livestock, MINAGRI Official closing remarks by Mr. Innocent Musabyimana, Permanent Secretary, MINAGRI
13.15-14.00	Lunch break	All participants	Facilitator
14.00 -14.30	Visiting exhibition, exchange of business contacts and gifts, free afternoon		

WORKSHOP PARTICIPANTS

1. Policy makers, Government of Rwanda
2. Rwanda Agricultural Board (RAB)
3. Rwanda Standards Board (RSB)
4. Dairy industry processors
5. Rwanda National Dairy Platform (RNDP) Board members
6. Dairy industry service providers
7. Dairy products sellers and consumers' organization
8. Academicians and students of veterinary medicine from the University of Rwanda
9. Academicians from University of California, Davis

NOTES:

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First Rwanda National Mastitis Workshop

The University of Rwanda, Busogo team collecting samples in Gishwati. The team includes students, farmers and faculty, pictured above.

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Annex D

RDCP II RWANDA TRIP REPORT

By

Nathaniel F. Makoni

DATE: 30-31 March 2015

PERIOD OF TRAVEL

I visited the Rwanda Dairy Competitiveness Program II from March 30 to March 31, 2015. I thank the RDCPII ABS/LOL Team for the good planning and ensuring that this trip was successful, I am most appreciative.

INTRODUCTION

This trip was requested by the RDCP II, through ABSTCM Rwanda, for me to provide technical assistance on large scale feed processing and distribution activities in RDCP II operation zones. This was further to my last visit when I visited artisanal feed processors that received funding from RDCP II. Specifically, the terms of reference were as follows:
1. Review the mid-term evaluation observations that, as a result of limited artisanal feed processors' capacity, RDCP II needs to work with large scale feed processors to support farmers' acquisition of dairy cattle feeds.
2. Visit the two large scale feed processors (Premium Animal Feed Industry Ltd [PAFI] in Rwamagana, & Zamura in Musanze) to establish their potential to sustainably supply feed to dairy farmers in Rwanda.
3. Give advice on how RDCP II can facilitate dairy farmer access to feed supplies from the large scale feed processors.

Date	Place	Activity
30/3/2015	Premium Animal Feed Industry Ltd [PAFI] in Rwamagana	I arrived in Kigali at 8:05 am and proceeded to the RDCP II office. A brief meeting was held with RDCP II Senior Technical Advisor. I also had a quick discussion with the USAID Senior Livestock Specialist to further understand the outcome of the recently completed mid-term evaluation and in particular commercial feed related issues.

		At 2:00 pm we proceeded to visit Premium Animal Feed Industry Ltd [PAFI] in Rwamagana district. On arrival a member of staff welcomed us as the Manger was away for business in Kigali. There were also trades people carrying out equipment repairs and maintenance. The member of staff gave us an introductory brief followed by a tour of the facility. The tour included the feed mill equipment and operations, ingredient and finished feed products storage.
31/3/2015	Zamura Feeds in Musanze	At 9:00 am we drove to Musanze to visit Zamura Feed mill. We arrived at 11:25 and started with a brief introduction on Zamura Feed Mill by the Manager Matthew. This was followed by a tour of the facility that included seeing feed mill equipment, extruder, inventory of ingredient stocks, feed analysis laboratory. Following a brief summary discussion, we departed at 2:45 pm and headed straight to Kigali airport.

Observations

As suggested in my last report the two large-scale feed mills, Zamura in Musanze and PAFI in Rwamagana are likely to impact the feed processing and distribution systems in Rwanda. Key to feed mill success is sustained demand for feed products usually driven by monogastric (poultry and swine) feeds. This is followed by ingredient availability, cost and prudent ingredient procurement procedures. The following were observed:

PAFI Visit

The PAFI feed mill is Chinese manufactured plant installed under a build operate and transfer arrangement. It has a production capacity of a maximum of 3 tonnes/product line per hour with two lines installed thus a total 3 shift production of 144 tonnes/day. The equipment is used for making dairy, poultry and fish pelleted feeds and includes an extruder to make floating fish feeds. The facility has adequate corrugated metal silos for grain storage and warehouse space for ingredient and product storage. It also has a weighbridge, extruder, pelleting unit and extruder to make fish feed products. However, the challenge to making quality fish feed will remain the

limited sources and procurement of high protein ingredients such as gluten feed, fishmeal and expeller soybean meal. Raw material for feed ingredients include Omena fishmeal, sunflower cake, and soyabean meal from Uganda, soyabean cake from Mt Meru Soyco company in Kayonza, wheat pollard and wheat bran from Pembe Industries in Byumba, Northern Province; maize bran, and bones for making bone meal from local sources.

The current PAFI commercial feed products include poultry, fish and dairy cattle feeds. The feed product sales are 40 tonnes/day of poultry feed. One poultry farmer who has a flock of 15,000 layers is buying 20 tonnes/day. The feed is packed in 20 kg bags and sold at 5,600 Frw/20 kg bag or 280 Frw/kg. PAFI does not sell dairy feeds at present but test feeds have been distributed to dairy farmers. Its market plan is to penetrate the Burundi market.

PAFI practises little fumigation and no rodent control and has high power consumption (>400 kW/hour), and low production and marketing efficiency. Though the plant is operational it requires competent talent to manage operations and repairs. High power consumption makes PAFI less energy efficient that threatens product competitiveness, particularly in a price sensitive feed market such as Rwanda. The feed mill journeyman is also an A2 level technician, which in my opinion might be a low technical level to fully comprehend efficient operational maintenance at full capacity.

ZAMURA Visit

The African Sustainable Development Project funded Zamura feed mill to initiate the project. The installed production capacity is 5 tonnes/hour or 120 tonnes/day (3 shifts). It receives technical assistance from US based Tyson Foods Poultry Company. It is well designed with an adequate warehouse building, energy efficient and with low power usage (200,000 Frw/month); has a quality control laboratory; and is vertically integrated. The equipment was manufactured in South Africa and includes a mechanical extruder that, unfortunately, has low efficiency.There is sufficient storage space for ingredients and finished products, a well organized feed ingredient and finished product inventory, and the facility is professionally managed. It has a feed analysis laboratory but does not have a truck weighing scale (weighbridge).

Raw materials used include sunflower cake from Tanzania (280 Frw/kg); cottonseed cake from Uganda (380 Frw/Kg); whole maize from local sources (165 Frw/kg), and maize bran from Minimex Company in Kigali (110 Frw/kg); fish meal from Uganda (900 Frw/kg); extruded whole soyabean for use in feeds; and mineral and vitamin premix from Kenya. Zamura has discontinued wheat bran use. It is making poultry, pig and cattle feeds but has no pelleter to make pelleted feeds.

Zamura feed products are sold from the factory but they are also sold at an outlet in Nyabugogo, Kigali. The products sold are dairy and poultry meals. Current commercial feed sales include 250 tonnes/month of mostly poultry feed sales; and for dairy feeds it is 10 tonnes/month. Zamura has a poultry farm with 7,000 layers and buys feed from their plant. The current prices are: dairy feed – 200 Frw/kg; layers meal – 295 Frw/kg; pullet growers meal – 280 Frw/kg; chicks starter meal – 300 Frw/kg; broiler starter and finisher meals – 300 Frw/kg; and pig feed – 210 Frw/kg

Ingredient Sources and Prices

Rwanda remains a net importer of most feed ingredients except for feed soybean cake from Mt Meru Soyco company in Kayonza town, wheat bran from Gicumbi and maize bran from local sources such as Minimex company in Kigali. The quality of fishmeal imported from both Tanzania and Uganda requires monitoring with regard to microbiological and protein quality.

Table 1: Feed Ingredient Costs

Item / Description	Source	Cost Frw / kg
Ingredients		
Maize	Uganda	165
Maize germ	Uganda	110
Fishmeal –Omena	Uganda & Tanzania	900
Soybean	Uganda	490
Soy cake	Kayonza	495
Sunflower cake	Uganda &Tanzania	280
Cotton cake	Uganda & Tanzania	380
Wheat bran	Gicumbi	85
Premix	Kenya, Europe & Uganda	Layers – 1,680 Chick –2,480 Broiler - 2,400 Dairy - 2,450 DCP - 1,240

Bonemeal	Rwanda	210

Product and other costs

1. Milk Price per liter = 180 Frw
2. Egg Price per unit = 91 Frw
3. Poultry – chicken price per kg =4,135 Frw
4. Truck transport per kilometer =10 Frw/kg or Frw 1,000/km
5. Commercial power cost per kilowatt hour = 152 Frw

RECOMMENDATIONS

The following are my recommendations.

General

The RDCP-II strategy to increase adoption of dairy concentrate feed should be at both farmer and milk buyer levels. Milk buyers should be sensitized to understand realistic and competitive costs of production. Farmers should target animals with potential to first of all exceed 12 liters milk production per day when fed good quality fodder. Commercial concentrate feed introduction should be gradual. In this regard, farmers are trained to maximize good quality fodder use and concentrate feed is fed as "topdressing" to achieve yields above 20 liters per cow/day. To demonstrate the benefits, early adopters can be targeted and used as lead farmers.

The feed millers should be facilitated to hold demand stimulation activities where they promote benefits of quality concentrate use. This should be done in conjunction with business-to-business linkages with other input suppliers and milk buyers. In addition to reproductive efficiency guaranteeing a calf per year as a result of improved feeding that enhances fertility, benefits demonstration should target both milk production and components.

Technical assistance will be required in dairy feed formulation and quality control, Standard Sanitary Operating Procedures (SSOP) and Good Manufacturing Practices (GMP). Feed mill operators knowledge of revenue share is critical in understanding formulations that would increase concentrate feed use and adoption by farmers. This will only happen when milk price/liter: feed price/kg ratio is 1.2 and above.

Both feed mills would benefit from RDCP-II technical assistance in optimal formulations for dairy concentrate feed, demand stimulation and market promotion of dairy feed products among dairy farmers. There is need to ensure that dairy farmers maximize production and use of good quality

fodder as a base for competitive milk production. Formulations for dairy concentrates will need to be least cost and should maximize grain by-products use instead of maize so as to reduce feed cost. The current low milk price/litre to feed price ratio/kg (e.g.,180:200 for Zamura – the highest among feed sellers) prohibits adoption of dairy concentrate feed by dairy farmers. The RDCP-II technical approach could start with farmer linkages targeting lead farmers who can demonstrate the impact of quality feed on milk production and components. For feed mill sustainability, large scale production is essential to ensure profitable business as feed production business typically has low margins.Thus, there is also need to assist them in promoting non-ruminant feed sales including those for poultry, swine and rabbits.

Specific

Organization	**Suggestions**
Premium Animal Feed Industry Ltd	It needs technical assistance in feed analysis, dairy formulations and quality control, procurement and ingredient storage to reduce spoilage and pest damage, linkage to dairy farmers and demand stimulation. It also needs assistance in production costing and pricing.
Zamura Feed mill-Musanze	It needs technical assistance in laboratory management, ingredient procurement, optimal ration formulation to ensure low cost feed products, and full-fat soybean processing.

Figure 1: Zamura Feeds

Figure 2: Premium Animal Feed Industry Limited

Annex E

RWANDA NATIONAL DAIRY PLATFORM

SUSTAINABILITY PLAN FOR COMMUNICATION CAMPAIGNS TO INCREASE THE CONSUMPTION OF MILK and DAIRY PRODUCTS

Prepared by Creative Communications for

Rwanda Dairy Competitiveness Program II

December 2014

1. BACKGROUND

This plan was prepared in accordance with the National Dairy Strategy (NDS) released by the Ministry of Agriculture and Animal Resources in April 2013, as pertains to Section no.3.3.8. SO 3.8 entitled "Promotion Program on Increasing Milk Consumption."

The NDS identifies several challenges to the development of the dairy sector, including the estimation that the consumption is not increasing fast enough to clear the projected milk supply. The Milk Consumer Survey of 2012 found an over-supply of 52 million liters which, if nothing is done, is expected to grow to 315 million liters in 2020. This could lead to a collapse in milk price which would gravely affect the income and well-being of farm families.

Furthermore, a significant proportion of Rwandans do not consume milk (33%) while there are those who consume individually 60 liters per year the average per capita is approximately 40 liters per year well below the 200 liters per year recommended by the World Health Organisation (WHO). The NDS goal is to increase the current average consumption of milk in Rwanda from 40 liters per person per year to 80 liters per person per year in 2020 which translates into an annual increase of 13 % per year. In order to achieve this target the NDS estimates that Rwf 1.8 billion (US$ 3,090,000) will be required for communication campaigns to stimulate increased consumption.

In order to contribute to the achievement of this goal, stakeholders in the dairy industry, in collaboration with Creative Communications Ltd (CC) and with support from the Rwanda Dairy Competitiveness Project (RDCP II), developed a communication plan to promote increased milk and dairy products consumption among various segments of the population. This will contribute to reduction in the oversupply of milk and thus contribute to price stability and farmers' income as well as contribute to improved nutrition among Rwandans. In addition, the plan provides a guide for identifying and mobilizing financial, material and technical resources to support communication activities.

2. OBJECTIVES

This sustainability plan for communication campaigns has the overall aim of reducing the gap between supply and demand for milk and milk products by encouraging stakeholders to adopt marketing communication strategies targeting individuals, families and consumers and non-consumers to encourage increased consumption of these products.

To achieve this objective, two strategic priorities are envisaged:

- To encourage through marketing communication campaigns current and potential consumers in identified segments to consume more milk and other dairy products

- To mobilize the necessary resources to sustain these promotional campaigns in order to contribute to the achievement of the goal of the NDS to increase consumption of milk and dairy products.

3. MARKETING COMMUNICATION CAMPAIGNS

3.1. Context

In 2012 RDCP II commissioned a Consumer Survey to identify barriers to milk consumption and thereafter held a Marketing Strategy Workshop to recommend ways to overcome these obstacles.

Among the recommendations made were to conduct a nationwide marketing communication campaign to encourage Rwandans to consume more milk and dairy products or to start doing so. Some of specific approaches indentified were:

- Conduct a general awareness campaign followed by campaigns targeting specific segments of the market
- Alleviate concerns about quality through the promotion of the Seal of Quality and through targeted encouragement to switch from raw or boiled milk to processed milk
- Use of above the line media (radio, billboards, posters in health centers and schools, TV SMS, branding of public transport vehicles) and below the line media (Umuganda/community leaders, church and political leaders, community health workers, cooperatives, road shows and local feeding programs)
- Emphasize the health benefits of milk and dairy products consumption
- Challenge the notions that milk is for babies or for the rich
- Use high profile influencers in sport or the performance arts to promote the consumption of dairy products

This plan is a reflection of those recommendations with additional approaches to supplement them.

3.2. Communication Interventions

3.2.1 Current ongoing communication campaign

In 2014 RDCP II commissioned CC to develop and implement an initial campaign to encourage milk consumption, which was launched in June 2014 for a nine (9) month-duration. Although the campaign is focusing on the Kigali Milk Shed (Gasabo, Kicukiro, Bugesera and Gicumbi) it has a national reach thanks to the use of Rwanda Television (RTV) and Radio Rwanda which attain national coverage.

The campaign brand, *Shisha Wumva*, which is a call to action as well as reminder of the benefits of milk, is steeped in the Rwandan ethos of milk consumption for a flourishing health. It has been more than well received.

At the initial stage the campaign targets the general population to remind them of the benefits of milk to individuals and children; thereafter it will turn its focus on increased consumption for current consumers and on recruitment of new consumers.

The achievements of this campaign in terms of people reached so far are estimated to be:

- Radio ads and talking points for DJs: 5,200,000 adults at least 4 times
- TV ads: 500,000 adults at least 4 times
- Events: 60,000 adults at least once
- Flyers: 2,000 flyers distributed
- Social media (Facebook, Twitter): more than 50,000 people
- POS stickers, T-shirts, caps and danglers: more than 2,000 distributed

Concurrent with messaging about increase or initiation of milk consumption, the campaign will start addressing quality concerns about milk and dairy products.

3.2.2. Sustaining the communication campaigns

The promotion of a change in lifestyle (e.g. "drink more" for rehydration) is not as easy as the promotion of a product (e.g. "drink Coca-Cola"). In order to bear results it has to be continued over an extended period of time to not only establish itself but to also compete credibly with competing practices. Thus we are proposing an initial marketing communication plan for a period of three years to build on the *"Shisha Wumva"* campaign and platform and moving from year to year from awareness for the general population to broad segments comprised of families, current and potential consumers and finally to other market niches and hard to reach groups.

Below is an outline of the plan:

3.2.2.1. Framework for Year I (2015)

While retaining the brand elements of campaign (slogan, logo, jingle, and creative platform) in order to save on resources the campaign would:

- Extend its awareness activities nationwide to reach 80% of the population more frequently to include:
    - Benefits of consumption
    - Quality of products
    - Cost/benefit of milk purchase compared to other beverage

- Continue to engage vigorously with the following segments:
    - Families with pregnant women, lactating women, infants, under 7 children and school age children
    - Consumers
    - Potential consumers
- Initiate community-based activities
    - Umuganda and other community-based activities
    - Info kit for 30% of the 45,000 Community Health Workers or 13.500 CHWs
- Work with Government for the annual nutrition drive
    - Month of the Milk
    - Ministers' tours of districts on nutrition drives
- Hold an annual fair for the dairy industry

3.2.2.2. Framework for Year II (2016)

Continue with the similar activities as in Year I but introduce more segmentation for more tailored messages as follows:

- New activities
    - Rural segments as per the 2012 Marketing Strategy Workshop mentioned above (Conservative masses/male traditionalists)
    - Women (Old introverts)
    - Geographic focus: Milk shed
    - Geographic focus: District
    - Info kit for 40% of Community Health Workers or 18,000 CHWs
    - Promotion of the consumption of other dairy products (sour milk, yogurt, cheese)
    - Switching from consumption of carbonated soft drink to consumption of milk

3.2.2.3. Framework for Year III (2017)

Continue with the similar activities as in Year II but introduce more segmentation for better tailored messages and new activities:

- Switching from consumption of raw or boiled milk to processed milk
- New market segments comprised of hard to reach population groups
- Info kit for 30% Community Health Workers or the remaining 13.500 CHW
- Exploration/initiation of penetration in neighboring markets

3.3. Expected outcomes

As a result of this campaign it is expected that de national goal of a growth of 13 % per year will be attained and that three broad outcomes will be achieved. These are:

- Increased milk consumption among pregnant and nursing women, pre-schoolers and school age children.
- Increased milk and dairy products consumption among segments of the population who are already consuming milk.
- Non-consumers start and continue consuming milk and other dairy products.
- Increased milk and dairy products consumption at 80 liters per person per year of milk will contribute directly an estimated $ 128 million USD to dairy farmers' income annually and provide an estimated 35,000 additional new jobs.

The tables in Appendix A show the outputs and activities required to achieve these outcomes as well as their costs and expected results. Below is a rationale for the approach suggested for each outcome.

3.3.1. Increased milk consumption among pregnant and nursing women, pre-schoolers and school age children

Household food insecurity continues to be a major challenge for many families in Rwanda. According to the Comprehensive Food Security and Vulnerability Analysis (CFSVA-December 2012) and the most recent Nutrition Survey (2012), the prevalence of chronic malnutrition among children under five years of age is still high at 43 %. The lack of proper nutrition among pregnant women contributes to high infant mortality and morbidity. It is estimated that fetal underdevelopment affect 37% of unborn babies and that most of the health costs associated with under nutrition occur before the child turns 1 year old. The annual costs associated with child under nutrition are estimated at Rwf 503.6 billion, which is equivalent to 11.5% of GDP.

In a new drive that aims at eradicating malnutrition in Rwanda, the Government has launched an initiative called *Thousand Days in the Land of a Thousand Hills*. The objective of this campaign is to improve the nutrition status of vulnerable groups in order to reduce morbidity and mortality related to malnutrition. The campaign, which will end by October 2016, targets children less than five years, pregnant and lactating mothers as well as school age children.

RNDP will work closely with MINISANTE, MINAGRI, MINALOC and other Ministries to join in efforts to increase milk consumption among these vulnerable groups through the following outputs:

- Vigorous campaigns through the media (radio talk shows, radio ads, radio talking points for DJs, TV talk shows and ads, outdoor and materials for point of service such as clinics) to reach the highest number of people at the lowest cost.

Radio will be the mainstay of this tactic as it has the lowest cost per a thousand people reached compared to other types of communication channels.

- Community events to interact with the audience and distribute informative materials with the aim of changing mindsets and behaviors; engage with and equip Community Health Workers (CHWs)(there 45,000 CHWs nationwide) and community leaders with information kits, and participate in Government nutrition drives. While these activities do not reach as many people as mass media they have the added advantage of one-on-one engagement.
- Advocating and lobbying relevant stake holders in order to expedite the planned school milk program and other schemes to promote improved better nutrition among vulnerable groups.

Indicators:

- Increase in consumption among:
    - Pregnant and nursing women who drink more milk
    - Pre-schoolers
    - In school children under 15
- Initiation of program and schemes for milk for school children and vulnerable groups

3.3.2. Increased milk and dairy products consumption among segments of the population which are already consuming milk

According to the 2012 Consumer Survey most Rwandans, of which 67% consume milk and dairy products, view highly the consumption of milk and other milk products. They know about its health and nutrition benefits but consume on average only 60 liters per person per year. This constrained consumption (the ideal is 200 liters per person per year) is due to several factors including:

- The perception that milk and dairy products are expensive
- The lack of confidence with milk quality
- The lack of understanding about other dairy products
- The belief that milk from exotic or cross breeds, from which processed milk is largely derived, does not taste as good
- The belief that processing removes some of the essential nutrients of milk
- The dependence on imported milk and dairy products
- The aggressive promotion of competing beverages (soft drinks)

The communication campaign will, over a period of three years, address these barriers through the following outputs:

- Mass media to reach the highest number of people frequently enough to dispel misconceptions and to promote more consumption of milk and dairy products; to demonstrate that milk consumption is a better investment in health and nutrition relative to other foods; and to encourage a switch from raw and boiled milk to processed milk; and re-segmentation of the market for more tailored messages best suited to the challenges.
- Community activities including local events to provide in-depth information and interaction with consumers.

As community norms are strongly in favor of milk consumption it is likely that change in attitude, mindset and practices will occur rapidly in this group and that milk consumption will be a significant part of the diet of the average citizen.

Indicators:

- Increased consumption among:
    - Adults females (over 15 years of age)who already consume milk or milk products
    - Adults males (over 15 years of age) who already consume milk or milk products

3.3.3. Non-consumers start and continue consuming milk and other dairy products

Non-consumers of milk or milk products, at 33% of the potential market constitute a sizeable fragment of the population. Some members in this group have lactose intolerance but can safely consume other dairy products. Others in this group have not even tasted milk in their lives. In general they prefer soft drinks over milk. The reasons they mention for not consuming milk are price affordability (38%), don't like it (22%) and allergy to milk (20%). They think that milk is for babies or rich people. On the positive side, 22% of this group thinks that they will use dairy products sometime in the future.

The campaign will capitalize on this strong indicator of willingness to purchase milk in the future with interventions to provide sampling opportunities, coupled with useful information on how to manage lactose intolerance. As with other segments of the market, the outcome of non-consumers starting to consume milk and dairy products will be achieved through the following outputs:

- Mass media for maximum reach and frequency to achieve top of the mind awareness of key messages.
- Community based activities such as road shows, trade fairs and community meeting where non-consumers will be given product samples to afford them the opportunity to taste milk and milk products and to receive pertinent information materials on how to manage lactose intolerance.

Indicators:

- Start and maintain consumption among:
  - Adults females (over 15 years of age)who don't consume milk or milk products
  - Adults males (over 15 years of age) who don't consume milk or milk products

3.3.4. Increased consumption of milk and dairy products will contribute directly $ 128 million to farmers' income and provide an additional 35,000 new jobs

Increased consumption of milk and dairy products will have direct benefits for rural incomes. It is estimated that increased sales of milk (from the current average national consumption of 40 liters/person/r year to 80 liters/person/year at the current price of Frs. 200/liter for a population of 11,000,000 people) will generate an additional Frs 88 billion (128 million USD) for farm families.

The NDS estimates that with increased milk sales there will be 35,000 new jobs created – employing mostly youth (young men) due to the physical nature of the work.

Indicators:

- Increased sales
- New farm jobs

4. RESOURCE MOBILIZATION

Currently, most resource mobilization efforts are geared to attracting external support while internal sources are not sufficiently explored and exploited. The involvement of the private sector in the development of the dairy sector is generally seen as low. This can be explained partly by the fact that organizational structures to promote the dairy industry are young and have not yet acquired skills and experience in resource mobilization.

However, congruent with the government goal of reducing reliance on foreign aid and as a beginning for laying the base of future self-sufficiency, members of the clusters of the Rwanda National Dairy Platform determined to follow the following approach:

- As a first step elicit support and assistance from resources available (financial, material or time) within the RDDP;
- As a second step seek opportunities and partnerships within the Private Sector Federation, including private firms and individuals as well as national institutions such as Ministries and their Boards and agencies; and
- Lastly, seek support from foreign development aid organizations as it will be necessary to support communication campaigns for a number of years until the milk sector becomes strong enough to finance its communication budget requirements.

4.1. Strategy for Resource Mobilization

The strategy for resource mobilization is based on three elements: a) definition of interventions and estimates of the necessary resources required to implement them; b) validation of planned interventions; and c) development of partnerships with the suppliers of resources (human, material, financial and know how).

4.1.1. Definition of interventions and estimates of resources needed over the next 3 years

Interventions required to increase milk consumption are described in section 3 above. The resources required for the implementation of these interventions are shown in the Appendix A.

4.1.2. Validation of planned interventions

This advocacy will be undertaken to promote the actions identified in section 3 of the plan and select the most effective methods to attract the interest of resources providers.

To do this will require:

- Involve milk value chain operators in the planning process in order to achieve ownership and commitment
- Prioritize interventions which have the potential to secure funding immediately and also by focusing on groups with the ability to consume large quantities of milk and dairy products;
- Present the plan and defend it with strong justifications to milk value chain stakeholders;
- Present the sustainability plan to potential resources providers emphasizing results and the expected outcomes as related to providers' programs and priorities.

4.1.3. Partnerships

Donor agencies have in the past and continue to support activities in the dairy sector in Rwanda. These partners are grouped into four categories:

- Government institutions, including MINAGRI, MINEDUC, MINISANTE, MIGEPROF
- Multilateral agencies: World Bank through AIDS control projects including MAP, UNDP, FAO,IFAD, UNICEF, WFP, WHO, EUROPEAN UNION and ADB)
- Bilateral partners (The Netherlands and Belgium cooperation agencies, DFID,GTZ/KfW, Switzerland, USAID, Japan, China)
- International NGOs (Send a Cow, Caritas, CARE, SNV, etc.)

- Media houses (radio stations, print media, online media)

Beyond development partners, opportunities for support can be explored such as contributions from the dairy industry and fund raising in the private sector, including private firms, bank and parastatal companies.

Mobilization of financial resources from partners of the dairy sector will involve actions such as:

- Getting acquainted with stakeholders' programs and priorities
- Seizing opportunities offered by donors present in the country;
- Orientation of new and potential partners about RNDP's programs and priorities;
- Develop and submit project proposals for funding.

The table below lists potential partners for each market segment. It does not pretend to be exhaustive but would serve as a guide for resource mobilization.

Market segments	Potential resource providers (Technical Assistance, Material Assistance and Financial Assistance			Observations
	Technical	Material	Financial	
Pregnant and lactating women, infants and children	Government agencies; private sector ; Multilateral & bilateral agencies; International NGOs.	Government agencies; Multilateral & bilateral agencies; media houses.	Government agencies; private sector ; Multilateral & bilateral agencies;	Multilaterals: Specialized agencies of the United Nations; World Bank; African Development Bank; European Union.
Milk & dairy products consumers	Government agencies; International NGOs.	Government agencies; bilateral agencies; media houses.	Government ; private sector ; multilateral agencies.	Bilateral agencies include embassies and cooperation bureaus such as USAID, DfID, GTZ.
Non –consumers of milk and dairy products	Government agencies; International NGOs ; private sector	Government agencies; Multilateral & bilateral agencies; media houses.	Government agencies; private sector ; Multilateral & bilateral agencies; International NGOs.	Government agencies: Ministries and their corresponding boards. Private Sector: Companies and cooperatives; members or non members of PSF International NGOs; national NGOs involved in rural development

An extensive list of potential contributors among the stakeholders is in Appendix B.

4.2. Expected outcome

As result of resource mobilizations it is expected that $ 2.3 million will be raised to finance the promotion of increased milk consumption which will produce the following key outcome :-

Outcome: Well resourced and managed communication campaigns.

The following outputs will be necessary in order to achieve this outcome:

- Technical resources are identified, hired and retained to mobilize resources and manage communication campaigns
- Internal and external resources to fund and sustain the campaigns are identified and secured
- Regular audits and evaluations to guide implementation are conducted

Indicators:

- Staff hired
- Marketing agency retained
- Funds and other type of assistance obtained
- Evaluation and audits

4.2.1. Technical resources are identified, hired and retained to mobilize resources and manage communication campaigns

Two senior staff must be identified and be hired conduct fund-raising and resource mobilization activities and run communication campaigns. These are a Marketing Communication Coordinator and a Partners Relations Coordinator Officer. These senior staff can be assisted by junior staff such as Media and Community Events Officers and a Financial Analyst.

It will also be necessary to retain the services of a marketing and communication agency to develop and further refine strategies, design communication materials, supervise their production and place them on various media channels according to pre-approved media plans.

4.2.2. Internal and external resources to fund and sustain the campaigns are identified and secured

As briefly stated in the introduction of section 4 RNDP will seek to identify and mobilize its own resources and lobby to secure resources identified in the NDS. These may include contributions from members of the clusters that form the milk value chain, allocations to nutrition in public institutions' budgets and private sector support as part of corporate social responsibility. Some of the fund-raising schemes (e.g. contributions and pooling of resources from value chain operators) may require feasibility studies to map out how such schemes could be made operational.

RNDP will also approach stakeholders in the international assistance community whose programs and priorities are in convergence with the NDS to seek support and develop funding applications. Once funding is secured it will be necessary to maintain and cultivate these partners through regular reports, site visits and briefing and highlights of notable achievements.

4.2.3. Communication campaigns and resource mobilization regularly monitored and evaluated

In order to assess performance in the implementation of this plan it is necessary to put in place, at the outset, a monitoring and evaluation system to measure achievements in relation to the outcomes of the plan as well as its impact, efficiency and effectiveness. This system should be based on data gathered from the all milk clusters at the national, and district level as well as data and information from stakeholders. This way coordination of activities and forward planning will be facilitated.

Since such system is yet to be developed, it will be necessary to recruit an evaluation specialist, at the beginning of plan implementation, who will develop such a system and other evaluation tools in order to start on the right footing.

This system would enable RNDP officers to continuously collect and analyze data in order to make informed decisions.

This monitoring and evaluation system, which should be an internal function of RNDP, would involve the following:

- Formulation of effectiveness, efficiency and impact indicators;
- Development of data collection instruments in relation with the above indicators ;
- Data collection and treatment;
- Data analysis;
- Use of results of the analysis for regular update and for decision making by the Platform.

Data analysis will involve comparison between results achieved with indicators developed and their targets. This system will also involve the following:

- Review plan objectives in relation to data gathered and assess whether planned outcomes will be attained;
- Assess progress made in relation to planned activities;
- Review RNDP's strategy and the sustainability plan and identify challenges and barriers constraining implementation;
- Assess whether resources were well utilized in relation to effectiveness and efficiency and lost opportunities and whether the goal of sustainability is being pursued.

5. MARKETING OF THE IMPLEMENTATION PLAN (APPENDIX A)

The implementation plan is presented in blocs (outcomes in blue) and time (Year I to III) at the national and district or milk shed levels. This presentation format will enable RNDP to sell a block or blocks of the plan to interested stakeholders.

The plan shows activities required, under each output, and their cost. This level of investment is deemed necessary by the consultant to achieve the planned outcomes and the goal of growing consumption by 13% per year. Most of the activities are already identified in the NDS and sources of support for them have been determined.

The timeline shown is the ideal sequence of events, but can be adjusted to reflect reality as funding for individual blocks of the plan becomes available.

RNDP will hold a one or half a day conference to present the plan to stakeholders and its own efforts to mobilize internal resources. Thereafter it will invite comments which will be integrated into the final plan and will ask for commitments to supporting specific parts of the plan.

Stakeholders who are willing to participate in the promotion of increased milk consumption may select a particular outcome (in blue) or output (in yellow) or activity (black on white) for the entire campaign period (3-year duration) or for a particular year.

Right after the conference RNDP will conduct follow up visits to stakeholders who made a commitment for support to provide a tailored presentation of the plan. CC will provide support to RNDP in these activities, including technical assistance in customizing the plan, presenting it and finalizing it.

6. ASSUMPTIONS

The following conditions are necessary for successful resource mobilization. They include the following:

- Ownership of the sustainability plan by RNDP and total commitment to its aims

- High involvement of RNDP in the process of mobilization;
- Increased involvement of PSF as a whole
- RNDP has staff and administrative resources to mobilize support for the plan and manage its implementation
- Resources (financial, material and human) are available as indicated in the NDS
- Operators in the milk value chain are willing to commitment human, material and financial means in support for the plan
- Stakeholders in the international aid community have priorities and programs in convergence with the sustainability plan and are willing to provide support its activities
- Support of a marketing communication agency well versed with the dairy sector in Rwanda. Their experience must be used to support RNDP in lobbying and advocacy to secure funding.