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USAID KENYA DAIRY SECTOR COMPETITIVENESS PROGRAM

ANNUAL PROGRESS REPORT

JUNE 2008 – SEPTEMBER 2008

623-C-00-08-00020-00

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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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List of Acronyms

APDT	Annual Performance Data Table
ABSTCM Ltd	African Breeders Services Total Cattle Management Limited
BDS	Business Development Services
CAIS	Center for Artificial Insemination Services
DTF	Dairy Task Force
ESADA	Eastern and Southern Africa Dairy Association
GMP	Good Management Practices
HPI	Heifer Project International
KCC	Kenya Cooperative Creameries
KDB	Kenya Dairy Board
KDSC	Kenya Dairy Sector Competitiveness Program
KENDAPO	Kenya National Milk Producers Organization
KLBO	Kenya Livestock Breeders Organization
LOL	Land O'Lakes, Inc.
MOLFD	Ministry of Livestock and Fisheries Development
MOLD (DVS)	Ministry of Livestock, Department of Veterinary Services
NGO	Non Governmental Organization
PERSUAP	Pesticide Evaluation Report Safer Use Action Plan
PEV	Post Election Violence
PMO	Pasteurized Milk Ordinance
PMP	Performance Management Plan
SBO	Smallholder Business Organizations
SoW	Scope of Work
SITE	Strengthening Informal Sector Training and Enterprise
SNV	Netherlands Development Organization
USAID	United States Agency for International Development

1.0 Executive Summary

This annual report provides the status of the Kenya Dairy Sector Competitiveness Program (KDSCP) and the challenges and lessons learned from startup to September 2008.

Key accomplishments in the reporting period include:

- Finalized procurement of all key staff and equipment. The KDSC office is now fully set up at Peponi Plaza and all the administrative structures in support for the program are in place.

- Developed a detailed performance management plan that expounds the KDSCP monitoring and evaluation framework has been developed. The baseline values for most indicators have been set.

- Submitted the revised KDSC year one work plan to USAID. The document has been approved.

- Developed a branding and marking policy to be applied to all activities and public communications funded by USAID under this Contract. The document has been submitted to USAID for approval.

- Prepared and submitted the KDSCP Sub-Awards Manual to USAID. The document details the process, types of awards and grants to be made and lays the procedures to be followed before awards and grants are issued. The sub awards manual is awaiting USAID approval.

- Issued a SoW for the development of the program website in August. This exercise is complete and the website is now operational.

- A report of the dairy value chain competitiveness assessment and action planning was received for review and comments. The final report will be presented in a stakeholders' workshop on 29th October, 2008.

- A report for Milk shed Mapping and Smallholder Business Organization needs assessment was also received in the reporting period.

- Finalized an Environmental Evaluation to identify potential environmental concerns in accordance with USAID regulations has been finalized. A mitigation report has also been prepared. Both documents have been submitted to USAID for approval.

- Established the Dairy Task Force (DTF): The DTF has been established and is operational. The DTF comprises representatives of all key stakeholders in the dairy sector. It is composed of 22 representatives drawn from key public and private stakeholders, in the dairy sector.

- The DTF has identified responding to the effects of the Post Election Violence (PEV) as priority for building a competitive dairy industry in Kenya. Four sub committees to address policy advocacy; peace and reconciliation; animal health; and food security were formed and are operational.

- Trained 16 KDB Station Managers, Regulatory Inspectors on Pasteurized Milk Ordinance and regulatory inspection. The course was well received by the participants who stated that this was the type of course material they need in order to carry out their professional duties in a competent and knowledgeable manner

2.0 Overview of the Project

The Kenya Dairy Sector Competitiveness Program (KDSC) aims to improve Kenya's dairy industry competitiveness, and increase the economic benefits to stakeholders in the entire dairy value chain. The program employs a market driven value chain approach, utilizing a Business Development Services (BDS) methodology. The KDSC program aims to transform the Kenyan dairy industry into a globally competitive, regional market leader, with the overall goal of increasing smallholder household income from the sale of quality milk.

The Program objectives are threefold:

- Increase competitiveness of the Kenyan dairy sector through collaboration among sector stakeholders and increased capacity of public sector agencies to serve the needs of the sector;

- Increase marketing of milk meeting quality standards by producer-owned milk bulking/cooling businesses; and

- Enhance access to market-linked business development services and technologies by male and female dairy farmers and processors producing dairy-related inputs.

In its implementation, the program pays particular attention to environmental and gender concerns and effects corrective action as appropriate. The KDSCP takes into account the varying roles, assets, knowledge and skills that men, women and youth bring to dairy farming. The program therefore facilitates the implementation of opportunities for integrating youth and family members into dairy value-chain economic activities.

2.1 Towards Strategic objectives

The KDSC Program contributes to the USAID Strategic Objective 7.0 on "Increased Rural Household Incomes". The Program is implemented through a range of activities grouped into three broad components. The components and the associated deliverables include:

Component 1: Enhanced Capacity for Milk and Production Input Quality Certification and Market Promotion

Deliverables comprise:

- Increased smallholder household income
- Increased use of technology
- Improve and enact industry policies and acts that enhance competitiveness

- Develop and implement/enforce quality certification frameworks and work towards a graded payment system
- Dairy enterprises achieve national/international certifications and enforcing quality regulations on suppliers
- Increase feed marketed under new quality standards

Component 2: Dairy Smallholder Business Organization (SBO) Development

The key deliverables are;

- Producer organizations strengthened
- Increased number of SBOs with national/international certifications
- Increased raw milk sales by SBOs under agreements that pay premium for quality
- Increased number of SBOs transformed into sustainable businesses
- Increased number of cooling units installed/rehabilitated by SBOs SBOs

Component 3: Availability of dairy Business Development Services

Outcomes are:

- Enhanced range of business services to producers
- Increased value of services/inputs provided by business service providers
- Increased number of smallholders purchasing private sector services at full commercial rates
- New technologies or management practices made available for transfer
- Increased number of dairy farmers receiving loans from financial service providers
- Increased number of smallholders engaged in new, diversified dairy related enterprises
- Increased number of dairy farmers receiving short term training

2.2 Geographic focus and target group

The KDSC program is being implemented in milk sheds in Central and Rift Valley that can competitively deliver 50, 0000 – 100,000 liters of milk per day of quality milk to processors. These two provinces account for an estimated 80 percent of all processed milk. A draft milk shed mapping report has been completed.

2.3 Implementation strategy

Implementation of the KDSC Program is based on innovative, international best practice approaches and methodologies that ensure achievement of expected results and sustainability of impacts long after the end of the program. Under the program, Land O'Lakes, Inc., the implementing agency, is facilitating market-based services/solutions, and supporting action-oriented policy research to overcome both industry-level and enterprise-level constraints to competitiveness at key points along the dairy value chain. Industry stakeholders have been engaged to identify competitiveness constraints. The program then employs market-based solutions by strengthening supporting markets for services and inputs

provided by commercial service providers, industry associations and where necessary, government service providers.

The KDSCP was signed in May, 2008 and therefore this report has very little people level impact. The last 4 months have been spent mainly on start-up activities. We anticipate a major pick-up on field level activities by quarter one of the next Fiscal Year. However, several process activities have been undertaken as shown below.

3.0 Performance Management section

3.1 Start up activities

a) Office setup

In the reporting period, activities to a large extent focused on setting up the administrative structures for the program. These included hiring of staff - Value Chain Coordinator, Monitoring and Evaluation Specialist, Grants Manager, procurement of equipment, and the acquisition of office infrastructure. All program staff are now in place and have settled.

b) Review of the KDCSP PERSUAP and the Environmental Review and Pesticides Assessment

To mitigate against potential negative environmental impacts of program activities and ensure compliance with USAID regulations, we have completed revising the Environmental Examinations and Pesticide Evaluation Report and Safer Use Action Plans (PERSUAP) in the reporting period. Proposed activities were screened to identify potential environmental concerns prior to implementation of the activity work plan. All activities that may involve use or handling of pesticides and develop a revised safe use action plan have been covered.

The assignment was completed and submitted to USAID in Quarter 2 for approval. The main features of the reports are summarized below.

a) ***Pesticide evaluation report and safer use action plan***

The report points out that while the Kenya Dairy Sector Competitiveness (KDSC) Program activities will not directly involve the use of pesticides, its contribution in improving the productivity of primary producers will lead to the indirect use of pesticides. The report further highlights the fact that improved breeds of cows introduced in the Kenya dairy industry to enhance productivity are usually heavily challenged by vector borne diseases brought about mainly by ticks and tsetse flies. The control of these disease vectors is therefore a critical and integral part of the development of the dairy industry. Their control is affected through Integrated Pest Management (IPM) practices designed to mainly use cultural methods of control with allowance for some limited least toxic pesticide use.

Field observations of small holder dairy farmers indicate that the farmers are relatively well aware of IPM and pesticide safer use practices to control pests. Evidence however shows a laxity and non-adherence to these practices.

To mitigate against this, the consultant presents a number of recommendations, the main ones being:

1. Capacity building for the key stakeholders involved in the regulation of Kenya pesticide industry, and those involved in training of smallholder dairy farmers on integrated pesticide management (IPM) and safer pesticide use. Capacity building is proposed for: the Kenya Dairy Board (KDB) who register primary producers; the Pesticide Control Products Board (PCPB) that registers and regulates pesticide products use; the Agrochemical Association of Kenya (AAK) that is trains and accredits pesticide stockists; and the Ministry of Livestock that controls livestock personnel qualifications and provides extension services to farmers.

2. The program to advice on a recommended suite of pesticides for use by dairy farmers. The list of recommended dairy pesticides which the KDSC program should advance is included in the report.

b) Initial Environmental Examination (IEE)

The report identifies the potential impacts on the environment to arise from the activity - *'Support milk bulking and cooling centers implementing quality control frameworks, such as HACCP, and/or acquiring ISO or equivalent quality certification: Cooling units installed/rehabilitated in SBOs/MBCs as a result of program intervention'*. The review indicates that this program activity will impact the following:

Air Quality: The main emissions from production, bulking and processing plants are odors and particles**.**

Noise: The potential causes of continuous noise could include: noisy operations at dairy plants include milk drying, which requires high airflows, loading and offloading of milk containers from the trucks and the movements of these transport vehicles to and from the site. Air discharges from drier stack, Heater fans, Air supply fans, Ventilation, Boilers, Pumps, Cooling towers, Refrigeration units, and Truck movements to and from the site.

Water: The volume of wastewater generated during dairy processing may be as high as two and a half liters of wastewater per liter of milk processed. (World's best practice is 0.5 liters of wastewater per liter of milk processed.) Poorly treated wastewater with high levels of pollutants – caused by poor design, operation or treatment systems – creates major environmental problems when discharged to surface water or land. Such problems include: Contamination and deoxygenating of streams and waterways by direct discharge or run-off of inadequately treated wastewater, excessive concentration of nutrients such as nitrogen and phosphorus in surface and subsurface waters, clogging of soils by fats/solids from wastewater used for irrigation and offensive odors from stagnant pools of untreated wastewater.

Solid Wastes: At the milk bulking and processing level, solid waste generally consists of defective product packaging e.g. paper cartons and plastic containers, recovered wastewater treatment sludge, solid and semi-solid intermediate or finished product spoiled or spilt. Solid waste generated by consumers consisting of poorly disposed milk products packaging material such as plastic is often the easiest environmental impact to see in urban areas. Cleaner production processes that minimize plant solid wastes and appropriate consumer disposal of packaging material should be followed to minimize this impact.

Emergency Preparedness and Response Plan: Accidents, equipment failure, climatic events and human errors often result in incidents where people and the environment are at risk. The anticipated incidents include; pesticide poisoning, disruptions caused by acts of nature, fire and flooding, plant breakdowns such as drain blockages, pump failure, disruption of power supplies and temporary or permanent loss of trained personnel. Emergency response plan that includes training in first aid provision and preparation of contingency measures should be instituted in the Dairy industry's production, bulking and processing operations.
The review recommends the following:

- Undertake EIA or Environment Audit as per EMCA 1999 guideline for each plant
- Site cooling plants away from residential areas or limit operation to the day time.
- Sitting of cooling plants away from surface water bodies and shallow aquifers
- Treatment of waste waters to acceptable standards before emptying in sewers
- Enclosure of noisy operations such a unloading bays and noise attenuation of equipment
- Make provisions for disposal of rejected or spoilt milk.
- Location of plant within reach of dump site or an incinerator for solid wastes
- Plant design to incorporate occupational health and safety considerations, emergency spills containment structures and emergency prevention and response plan.

c) Development of year one work-plan

The program management finalized the year one work plan and submitted the document to USAID for approval.

The approval was granted in August 2008; however a number of activities were carried out before approval to avoid implementation back logs.

d) Sub awards program establishment

The program management has finalized the structure, operation and management of the KDSCP grants program.

e) Developing and issuance of the scope of work (SOW) for the KDCSP website design

The SoW for the design of the program website was finalized in quarter one and issued to 12 consultants. Six (6) consultants have since submitted their proposals. Evaluation of the applications was carried out by an evaluation team composed of KDSCP team and a representative of the DTF. Contract documents were finalized and issued to Sawa Sawa Ltd, the winning bidder. The program website is up and can be accessed at www.kdairyscp.co.ke .

f): Gender sensitization for staff

In the reporting period, three members of staff - Dairy Value Chain Coordinator, Grants Manager, and the Monitoring and Evaluation Specialist- participated in a gender sensitization workshop organized by the USAID's Greater Access to Trade Expansion (GATE) INGIA VC project. The workshop explored ways of integrating gender in value chains, and how this can help achieve the program goals. The workshop was organized for three USAID funded programs which included the KDSCP, Kenya Horticultural Development Project (KHDP), and the Kenya Maize Development Project (KMDP).

The exercise lasted five days (between 16th and 25th September, 2008) and included a two days workshop in which staff, with the guidance of the GATE team, reviewed literature on gender and value chains, and how gender can be integrated in value chains for better performance of interventions. Participants were then guided through a data collection and analysis exercise to identify gender based constraints, and how they can impact the program results, and to design mitigating measures where necessary. This required a fresh look at the program objectives, activities, and indicators of progress and their measurement. The findings were presented in a workshop in Nairobi.

A number of lessons were learnt from the exercise, which may enhance the KDSCP impacts among the various cadres of the target population. These include:

1. Incorporating gender issues in programs at inception and monitoring project impact by gender is better for greater impact than reporting sex disaggregated data.

2. Assessing the existence of differential access and use of project outputs (especially technology dissemination) among the beneficiary groups by gender and correcting for imbalances as appropriate could enhance project impacts. We will need time to validate this however.

The KDSC program will therefore greatly benefit from this experience given that program implementation is still at the initial stages.

g) Baseline assessment

During the first quarter a detailed plan for the Baseline Assessment was developed together with the Performance Management Plan. These detail the KDSCP

monitoring and evaluation framework. The baseline assessment was finalized in the reporting period. The Annual Performance data table (APDT) together with the validated baseline values is attached (Appendix 2). The full baseline report will be shared.

h) Establishment of the Kenya Dairy Sector Competitiveness Task Force (DTF) and donor working group on competitiveness

The first part of this activity, establishing the DTF, has been accomplished. Key to the KDSC program implementation is the establishment of the DTF. This vital program organ has been successfully established, with membership drawing from all players in the industry. Members include private sector leaders, farmer organization representatives, processors, service providers, development organizations including Non Governmental Organizations (NGOs) engaged in dairy industry development, and government officials. (See appendix 1).

The task force was formally appointed by the Permanent Secretary, Ministry for Livestock Development on 16th May, 2008 and is tasked with two key roles:

1. To advise the Minister on the actions needed to restore the growth trajectory of the dairy industry that was impacted by the Post Election Violence (PEV)

2. To serve as a stakeholder think tank and advise the minister on long term issues affecting the dairy industry

The task force meets frequently and the minutes forwarded to the Ministry. The DTF will also occasionally brief the Minister.

The Task force has since developed a work plan and action plan on four priority areas identified as meriting immediate action after the post election crisis. The priority areas include:

- Safeguarding the health of the dairy herd through emergency vaccination and tick control
- Promoting sustainable peace and reconciliation in the dairy producing areas
- Restoring food security, generating cash income and employment opportunities for smallholder dairy that were impacted by the post election violence, and
- Consolidating and harmonizing dairy policy to respond to the challenges posed by the PEV

This was presented to the Ministry in a briefing by the DTF on 18th June, 2008.

For ease of operation, the DTF formed four sub committees to address the priority areas mentioned above. The subcommittees are policy advocacy; peace and

reconciliation; animal health; and food security. All the sub committees are operational.

Promotion of peace and reconciliation was deemed an immediate concern by the task force since it directly affects milk supply. The DTF, through the peace and reconciliation sub committee, recommended that the KDSC program facilitates three exploratory leaders' workshops in the Rift Valley province as a precursor to a series (18) of peace field days in the target area. Three workshops under the theme "Charting the Way forward for a Prosperous Dairy Industry" have been held. The meetings were held in Eldoret, Kericho and Nakuru milk sheds, and collected a wide range of proposals on how to revitalize the industry. These meetings were facilitated by a renowned peace facilitator, Pastor Oriem.

Key outcomes of the peace meetings

Perhaps the most important outcome of the peace building workshops was the opportunity for participants to appreciate the magnitude of loss in the industry as a result of the post election violence. Participants also shared their individual and dairy associations' experiences, - read challenges, constrains and opportunities-, in increasing milk production and marketing.

Leaders on their part stressed the importance of group associations, especially in the face of rising cost of doing business, and urged farmers to form bigger groups to improve their bargaining power and achieve economies of scale. Participants were further challenged to treat dairying as businesses to enable them improve their livelihoods. The leaders further used the forums to educate farmers on the need for strong representation at the national level. The chairman of the Kenya National Milk Producers Organization (KENDAPO) informed participants of their initiative, with the support of the Kenya Dairy Board and other dairy producer associations, to join a national dairy producer's organization in line with other national agricultural products organizations. The aim of KENDAPO is to be a strong voice for dairy farmers and thus improve their bargaining power. He stressed that the organization will sit together with other stakeholders especially processors and feeds manufacturers and negotiates for the mutual benefit of all parties.

Participants in addition discussed ways of creating employment opportunities in the sector. They noted that the unemployed youth were the major perpetrators of the post election violence and that efforts need to be focused on providing them with more responsibilities, to enable them to develop interest in dairy farming. One participant suggested that dairy farmers with young adults could transfer the responsibility for managing one dairy cow per youth in order to learn on the job.

Local leaders in dairy business further committed to lead their communities in concentrating on development rather than political rhetoric. They urged local communities to conserve the environment in order to exploit the full potential of the Rift Valley Province, which they observed used to produce about 70% of the total milk in the country but has experienced serious declines in output.

Participants agreed that dairy farmers have to produce quality milk that meets requirements for both domestic and export markets.
On the way forward for the industry, participants decried the quality of graduates of the local training institutions, citing lack of practical skills of graduates as a serious concern for the industry's development. They complained that even university graduates seemed ill-equipped to offer quality services. This situation needs to be addressed for the sector to be competitive in the region.

Other observations and recommendations included:

- That farmers should change their farming attitudes to enable them to increase production
- That widespread in–breeding and diseases have worked against the sector and quality herds

The peace meetings were attended by 337 (53 female) participants from Central Rift, North Rift and the larger Nakuru District, and graced by representatives of most stakeholders in the industry. Stakeholders participating were all given a chance to make presentations on peace and how conflict impacts their operations and by extension, the entire industry.

Representative of the Ministry of Livestock and Development talks to participants at the leaders' peace workshop in Kericho.

Happy Cow representatives promoting various technologies in a peace meeting in Eldoret

Lens Feeds demonstrating feed conservation at a peace and reconciliation meeting at Eldoret

The occasion was marked with song and dance, with men, women, and youth from all communities and the local administration taking part

Participants listen to Pastor Oriem, the chief facilitator in the peace and reconciliation meeting in Nakuru

The meetings ended with the National Chairman of KENDAPO, who is a member of Wakulima Cooperative in Central Province, extending invitations to their Rift Valley Province counterparts to visit his cooperative and share notes on the opportunities, challenges, and constraints. As earlier stated, these meetings laid the foundation for a series of field days which started in the second quarter in both provinces. Three have been held to date.

3.2 Component One: Enhanced Capacity for Milk and Production Input Quality Certification and Market Promotion

a) Develop Dairy Value Chain Competitiveness Assessment and Action Plan

A scope of work was prepared in Quarter one and issued to 34 potential consultants who had expressed interest. Slightly over half (18 consultants) submitted their expression of interest to carry out the assignment. The evaluation was done by the KDSCP team and a Representative of the DTF. The assignment was awarded to Strategic Business Advisors Ltd (SBA). A Draft report has been submitted to KDSCP team for appraisal before being shared with the DTF. The report will be presented to a stakeholder forum to be held on October 29th. The USAID Mission Director and the Permanent Secretary in the Ministry of Livestock Development have been invited to officially launch KDSC project activities during this forum.

The report identifies the key factors that impede competitiveness of the dairy industry to include the following;

Production Efficiency and Quality Constraints

- Low productivity: Increases to yields and quality of production are limited by: poor breed quality; patchy availability of extension services such as artificial insemination; low feed quality and poor feed management; disease control issues; non-optimized calving intervals.
- Unhygienic equipment and lack of hygiene knowledge limit quality of milk produced at the farm level.
- Organizations involved in bulking and cooling, particularly co-operatives are inefficient due to poor management skills and lack of effective business systems.
- Quality of cooled milk is low due to the length of time taken between milking and cooling; equipment breakdown caused by lack of investment and poor technical skills exacerbates the problem.
- Overall costs of processing are high due to: high transport and electricity costs, out of date equipment at KCC, inefficient cooperative processors and the fragmented supply base.
- Product quality is low in some cases because of weak standards, lack of cold chain (not all input milk is cooled) and poor quality of inputs.
- Smaller processors often lack skills and business know-how to compete effectively in the market.
- Costs of transport are elevated by poor road infrastructure and KDB interference.
- Quality improvements require cold chain transport, use of food-grade containers and improved hygiene knowledge.
- At the retail level, the lack of cold storage facilities means that most milk products can only be stocked in the mornings and quality can be

questionable. These quality problems are compounded by use of non food-grade equipment and poor hygiene knowledge.

Capacity Optimization Constraints

- For milk cooling plants, overall capacity investment across the country is irrational and uncoordinated. In some areas there are many plants competing for the same milk, whereas in others there are none at all. Further, investment often focuses on physical assets with insufficient attention given to organizational issues.
- Overall, processing capacity is not optimized to compete internationally. For powder, which requires significant scale, only KCC has capacity but its plant is old and under utilized.
- There is only limited processing capacity available for satisfying niche markets.
- Seasonality of supply leads to uncertain utilization and therefore lower annual returns and diminished incentive to invest in processing.
- Few areas in Kenya are served by cold chain transport.
- The network of large retailers covers only part of the country meaning that other people who would like to shop in supermarkets cannot.

Market Efficiency Constraints

- Price instability exacerbated by lack of contracts between processors and suppliers, and a huge number of market intermediaries.
- Investment in production is discouraged by uncertain and variable returns: There is a vicious cycle of distrust between producers and purchasers. Producers cope with fluctuating prices and quotas by changing buyers; Purchasers see unreliable quantity of supply and producers who switch frequently; Seasonal fluctuations are high due to weather patterns and poor feed management; Purchasers sometimes exploit market power by rejecting milk on spurious grounds and failing to pay fair prices; Unpredictable interventions by politicians, government, NGOs and KCC create further instability; Producers have a poor understanding of end consumer requirements; High costs of inputs coupled with uncertainty discourages optimal investment by farmers; Poor security in some areas limits investment and growth potential.
- Processor relationships with formal sector purchasers are often poor. Prices are pushed down as there are few purchasers, there is often plenty of supply and bulker negotiating skills are weak. The relationship is further eroded by unreliable quantity as bulkers don't always provide sufficient benefits to incentivize producers to supply all of their output. Seasonal fluctuations exacerbate this.
- The poor relationship with suppliers leads to poor quality as there is no incentive for producers to invest in supply.
- The situation is exacerbated by the application of volume quotas by processors.

Enabling Environment/Policy Constraints

- There is limited accurate data available on a regular basis on key aspects of the sector to facilitate appropriate policy and investment decisions;
- Sector is currently operating on outdated legislation; new legislation has yet to be passed and may need further revisions;
- The role of KDB elicits confusion in the market; perception as a regulatory body and limited focus on development al aspect impedes competitiveness of the industry;
- Wide range of institutions has limited capacity to execute their mandate better – KDB; KEBS; CAIS among others.
- Role of KCC confusing to investors and key players in the industry; ownership status and market stabilization role need to be clear.
- In line with the constraint above, there is currently no clear policy framework to govern the country's approach to market stabilization – this is currently the major constraint to increased investment at all levels of the value chain – production, processing and distribution.
- Need for development of a National Dairy master plan clearly articulating vision of the sector in the next 10 – 20 years, including structure to enable the industry compete effectively in the international market

The consultant recommends the following:

Creating a more stable Market is critical for future competitiveness of the Industry: As is the case in other competing countries, there is a need to look into specific modalities to level production year round. These could include: enhancing role of KCC; developing a market stabilization fund; facilitating more efficient use of the powder plant among others. It is recommended that a detailed analysis is undertaken to assess the most optimal route for Kenya in this regard.

Feed conservation: Feed conservation for a more efficient dry season feeding to stabilize milk output across seasons. This will enhance cow productivity.

There is a need to implement key areas of policy reform. These include: the need to revise and enact new legislation in dairy and feeds; the need to analyze best option and refine the role of KDB; the need to provide clarity on the ownership and status of KCC; the need to develop a market stabilization policy as outlined above; and, the need to develop a strategic focus for export growth and package of appropriate incentives.

There is a need for enhancing quality of milk across the supply chain: Rationalizing and improving the cold chain; creating industry wide traceability mechanism – starting on a pilot basis with institutions involved in export; building capacity of key institutions to monitor the process.

Need to enhance capacity of key institutions supporting the industry: Support an expanded developmental role for KDB; Identify and support key associations; Continue supporting relevant research particularly on appropriate low cost feed substitutes; Continue to support other key government institutions to service the industry – CAIS, KBS; Undertake a more detailed institutional audit to identify key institutions to support and their requirements.

Continue to support improved productivity at farm level: this will include: Manage transition from PEV effectively to facilitate confidence and renewed investment at farm level; Facilitate organization of farmers to allow them to benefit from economies of scale and improved market linkages; Continued extension to improve uptake of technologies and commercialization of dairy farming; Identify ways to improved security in some locations where this is a problem.

Strategically support the development of processing capacity to penetrate niche export markets: Develop incentive packages for existing and new processors in cheese, yoghurt and other high value niche products; Duty free Access to machinery and equipment; Facilitate Access to finance to expand through guarantees and other mechanisms; Access to land; Access to technical know-how – production, packaging, branding and marketing; Undertake market research in selected markets and develop specific promotion strategy for exports; Support improved quality standards as outlined above.

As earlier mentioned, the findings of the study and the recommendations will be presented in a stakeholders' workshop, and action plan for the industry developed on 29th October, 2009. The final report will be shared in due course.

b) Building the capacity of Kenya Dairy Board (KDB) to develop and enforce quality standards

The KDSCP worked closely with the Kenya Dairy Board in the reporting period to mentor the regulatory Services Manager and department staff as well as advise the Kenya Dairy Board and Kenya Bureau of Standards (KEBS) on milk quality-related and Productivity/Efficiency issues. A workshop with the KEBS dairy technical committee will be held for one week from 17th to 21st November, 2008 to review and finalize the texts of a number of Kenya/EAC dairy standards[1]. At this meeting, the GMP manual will be reviewed with a view to having it approved as a KEBS official document.

Considerable progress was realized in this crucial program activity, especially building the capacity of KDB and the Kenya bureau of Standards (KEBS) to improve on quality of milk. Specific accomplishments include:

[1] The workshop target is to finalize writing six new standards

i) Initiated review process of the Kenya dairy ordinance

The Land O'Lakes Quality/Policy Advisor, together with the senior KDB technical staffs has started to write a Milk Ordinance for Kenya. This is in progress and will take months to complete. This activity was scheduled for the fourth quarter in the year one work plan but has been initiated early due to the long process it takes to finalize.

ii) Trained 16 regulatory personnel on dairy business inspections

16 KDB Station Managers and Regulatory Inspectors were trained on Pasteurized Milk Ordinance and regulatory inspection in the reporting period. List of those trained attached (Appendix 1). The course was well received by the participants who stated that this was the type of course material that they need in order to carry out their professional duties in a competent and knowledgeable manner. The officer in charge of inspection at the KDB commended the quality and import of the training as shown in Box 1.

This was the first group to be trained and a second group of 21 participants will begin training in October 2008.

As is, we have already met the target number of regulatory personnel to be trained on business inspection for the Fiscal Year. It is however our view that this activity needs scaling up to enable standardization of inspection in the country. This is very important for the performance of the program since the program activities are geared towards enhancing quality of milk at all levels of the chain. All inspectors therefore need to have the requisite technical knowledge on milk inspection.

Box 1: Comments on the KDB Inspectors training

The course is very relevant especially for the officers who have not worked in a milk processing plant before. The officers were expected by the board to carry out regular inspections on the milk processing plants, a task they had been unable to undertake because of lack of skills.

We have developed a detailed check list for processing plant inspectors which they would not have been able to implement without such training. However, most of these officers have now started undertaking the inspections using the check list even before completion of the course. By the time we finish with the on-coming 3 day training and practically inspect a processing plant as part of the training, you can be sure that the result will be a more competent team of dairy inspectors.

For those with a background on Dairy and worked in a processing plant before, the course gives them an opportunity to look at the manufacturing process from a regulatory (food safety) perspective. This is very important if we are to facilitate the industry to comply with the stringent SPS measures.

Ms. Joyce Kiio
KDB

iii) Facilitating the task force to promote differential payment for quality

A discussion paper on Differential Graded Payments for Raw Milk Quality was developed and submitted to the KDB in June, 2008. The paper puts forward a number of discussion points, key among them being the use of a single set of laboratory tests for all raw milk quality assessments at all milk collection centers (MCC) and milk reception platforms in the processing plants.

It proposes that KDB, operating through a stakeholder 'Milk Quality Committee' controls the raw milk quality grading system within the formal stream, while continuing to look after the informal stream, and become the figurehead for its smooth operation. KDB would be regulating the processing plants, by means of its regulatory inspectors and through them could extend its 'quality' reach down through the MCCs within the formal system.

As an adjunct to the graded payment for quality system, the control of milk quality in the formal stream would be supported by a requirement for the collection and/or delivery of a minimum number of regulatory samples of raw milk and milk products from the Milk Collection Centers and Processing Plants to laboratories approved by the Regulatory Agency. The sampling and testing schedule requirements will be defined in the Kenya Dairy Ordinance. The sampling, monitoring and inspection of the analytical results data would be monitored and collected by KDB. By this means, KDB regulatory inspectors would have access to a continuous flow of laboratory results for raw milk and milk products from the milk collection centers and the processing plants, providing supporting data for the purpose of monitoring the graded payment for quality system.

The informal stream still has to be monitored and controlled while the participants are being encouraged to shift over to the formal stream. KDB will do this through the regulatory inspectors who will act to inspect the milk traders, and handling practices and the transport used for hauling milk, milk coolers and raw milk selling points. Milk cooling centers in the informal stream should be subject to regulatory inspection and required to meet GMP requirements in order to be issued an annual business or 'Quality Performer' license requirement. Issuance of the license should require implementation of GMP.

The traders who buy, haul and sell milk could come under some kind of control by requiring them to attend a milk quality workshop and issuing them an annual 'Quality Performer' license. The milk coolers that they supply will be subject to routine formal regulatory inspection and hopefully that would create a measure of back-flow pressure onto the traders that would require them to take on some degree of responsibility for the quality of their operations.

The paper also proposes a possible model for implementation. The paper is still being reviewed by the Kenya Dairy Board.

Given its significance to program success, we intend to speed up this process in the next quarter, and have the proposal discussed, improved, and adopted by the DTF.

iv) Food Safety/GMP manual

A draft Good Manufacturing Practice manual was prepared in the reporting period and submitted to the Kenya Dairy Board (KDB) in preparation for stakeholder consultations. The GMP program will be applied to Milk Collection Centers, Milk Bars and processing plants throughout Kenya. The KDB has approved the document. We now await approval from the dairy Task force.

Facilitated the task force to identify and standardize the main analytical tests used for milk reception in milk collection centers

A Scope of Work for a tender to be issued to evaluate the technical capacity of dairy and food analytical laboratories in Kenya has been developed. The information generated by this survey will enable KDSC to plan the laboratory capacity building interventions. A baseline Milk Quality Survey has also been published for tender. Bids will be opened on 21st October. The aim is to obtain data relating to the chemical and bacteriological quality of milk and milk products in Kenya.

3.3 Component Two: Dairy Smallholder Business Organization Development.

a) Identify Milk Sheds and Smallholder Business Organizations Needs Analysis for KDSC Interventions.

A scope of work was prepared and issued to 78 potential consultants who had indicated interest. Twenty six (26) consultants submitted proposals to carry out the assignment and the evaluation exercise carried out by a team from KDSCP and a representative from the DTF. The assignment was issued to Fibec Consultants. The report identifies the milk sheds with the potential to produce 50,000 – 100,000 liters of milk per day, points out where other development agencies are operating to avoid duplication, and finally suggests the appropriate milk sheds to focus on. This will be discussed further on 29th October, 2008.

3.4 Component Three: Increase Availability of dairy Business Development Services

a) Registration of facilitators

As mentioned, the KDSCP employs a market driven value chain approach, utilizing a Business Development Services (BDS) methodology to enhance the competitiveness of the local dairy industry. The main players under this model are local service providers, while Land O'Lakes, Inc. plays a facilitative role. In line with this, registration of facilitators is currently underway. The work will start once facilitators have been identified and sub awards done. This is planned for the current quarter.

3.5 Challenges

We experienced a number of challenges in the reporting period which in some way have slowed down the execution of some activities. These include:

- **Procurement procedure:** The procurement process is very elaborate and sometimes results in activities taking up to three months to execute. For the commissioned studies in particular, the call for expression of interest lasted about three weeks, proposal development another four weeks, and the evaluation took two weeks. This delays implementation. We will take full notice of this in the coming periods to cut down on lag time.

- **Sequencing of activities:** In our year one work plan, we did not factor in the long procurement process while planning some related activities, and hence the delays in their implementation. The Business Development Services (BDS) market diagnostic exercise for instance has to be targeted at the areas/milk sheds where the KDSCP will be implemented, and therefore depends on the outcome of the milk shed mapping exercise. This activity has been slightly delayed. Again, this will be considered going forward to speed up the implementation process.

4.0 List of Counterparts/Beneficiaries

Kenya Dairy Board (KDB): Is the key public agency that both regulates and promotes the dairy industry. The main functions of KDB are the enforcement of national standards for the dairy industry, training for the industry, facilitation of stakeholders' activities, maintenance of a databank for the industry, and regulation of imports.

The KDB has perhaps been the most active DTF member, and has received a number of sub awards to carry out a number of activities on behalf of the task force. Some of the activities are:

- Organizing out the peace field days on behalf of the DTF. They organized four field days in the reporting period
- The Board is engaged in writing and/or reviewing the industry codes of practice, including the food safety manual, milk ordinance, dairy code of practice, among others

Kenya Bureau of Standards (KEBS): Is a Government of Kenya (GoK) agency that has a major role in the regulation of the dairy industry as the statutory body charged with the enforcement of standards and certification of quality standards of all products and services in the country.

The agency is actively engaged in the development of industry standards, specifically the Good Manufacturing Practices (GMP) with other DTF members. The KEBS will be actively engaged in the November working retreat and is expected to play a major role in the writing of the six quality standards targeted for completion.

Dairy Task Force: The DTF operates like the program and sector advisory committee, and is composed of all industry stakeholders. See list in Appendix 1.

5.0 Appendices

Appendix 1: Members of the Dairy Task force

No	Name	Organization	Telephone	E-mail
1	Machira Gichohi - Chairing	KDB	0722-700717	pgichohi@kdb.co.ke
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19	S Murimi –Taking minutes	KDB	0722-901345	smurimi@kdb.co.ke
20	General Manager Spinknit Dairy	Spin knit		
21	Plant manger Githunguri Dairy	Githunguri Dairy		
22	Cooper (K) L	Cooper (K) L		

Appendix 2: Annual Performance DATA Table (APDT) with validated Baseline Values

Impacts					
Performance Indicator	**Baseline**		**Year 1**		**Comments**
	Year	**Value**	**Target**	**Actual**	
Household Level Impacts					
% change in smallholder household income (%)	2008	Kshs. 2,043	10%	0	
Number of rural households benefiting	2008	0	15,000	0	
Sub-Sector Level Impacts					
Total volume of milk purchased from smallholder dairy farmers (MT)	2008	0	2,000	0	
Total value of milk purchased from smallholder dairy farmers (US Dollar)	2008	0	1 M	0	
Total volume of exports to regional and international markets (MT)	2008	17,500	18,700	0	
Total value of exports to regional and international markets (US Dollar)	2008	8.75 M	9.35 M	0	
% change in volume of milk conforming to quality standards increased	2008	0	0%	0	
Total value of milk conforming to quality standards increased (US Dollar)	2008	0	0%	0	
% change in volume of milk and dairy products sold by processors	2008	To be established	3%	0	
% change in value of milk/ dairy products sold by processors (Percent)	2008	To be established	3%	0	
Number of Jobs created in the value chain	2008	0	1,000	0	
Firm Level Impacts					
Number of producers accessing/ receiving/ utilizing BDS services, inputs, technologies, and management practices	2008	0	8,000	0	
Number of farmers using improved technology	2008	0	6,000	0	
Change in annual productivity (Liters)	2008	6.5	11	0	Decline in productivity observed compared to yield level in proposal/at the end of the KDDP. This could be attributed to Post Election Violence and the dry weather

					during the period the assessment was carried out (August/September). Significant difference observed across Provinces - Rift Valley 5.4 liters, and Central Province at 7.5 liters per cow per day
% change in gross margin per litre of milk	2008	Kshs. 5.80	4%	0	Average price per liter of milk is Kshs. 20. This is similar in both provinces.
% change in cost of production	2008	Kshs.14.20	2%	0	Cost of agricultural inputs has gone up considerably in the country due to the Post Election Violence. The worst affected are farmers practicing zero grazing, some of whom report costs of up to Kshs. 19 per liter of milk. In Rift Valley Province, where 53% of sample practices open grazing, cost per liter is Kshs. 11.6. In Central, cost of production averages Kshs. 16.7 per liter.
Outcomes					
Component 1 - Increased smallholder household income from the sale of quality milk					
Number of industry policies and acts improved and enacted	2008	0	0	0	Considerable progress has been made however. Have started writing the milk ordinance for Kenya in collaboration with the Kenya Dairy Board staff Trained 16 KDB Station Managers, Regulatory Inspectors on Pasteurized Milk Ordinance and regulatory inspection Wrote a Good Manufacturing Practice manual. The text has been approved by KDB. The GMP program will be applied to Milk Collection Centers, Milk Bars and

					Processing Plants throughout Kenya Have organized a workshop with the KEBS dairy technical committee to be held for one week between 17th and 21st November to review and finalize the texts of a number of Kenya/EAC dairy standards. At this meeting, the GMP manual will be reviewed with a view to having it approved as a KEBS official document
Number of Quality certification frameworks (Milk product, Animal feeds) developed, implemented/enforced	2008	0	0	0	
Number of dairy enterprises achieving national/international certifications and enforcing quality regulations on suppliers	2008	MBC: 0 Processor: 0 Vendor: 0	8 2 -	0 0 0	
% change in volume of feed marketed under new quality standards	2008	0	10%	0	
% change in vale of feed marketed under new quality standards	2008	0	10%	0	
Total Value of non-project resources leveraged (US $)	2008	$0m	$5m	0	
% change in revenue collected by KDB and KEBS	2008	To be established	10%	0	
Number of new technologies or management practices under research as a result of program assistance	2008	0	5	0	
Component 2 - Dairy Smallholder Business Organization (SBO) Development					
Number of producer organizations strengthened	2008	0	20	0	
Number of SBOs/MBCs with HACCP and/or national certification	2008	0	8	0	
% change in volume of raw milk sold by SBOs under agreements that pay premiums for quality	2008	0	10%	0	No SBO sells milk under agreements that pay premium for quality in the program area at present. The program has

					submitted a discussion paper on differential graded payment for raw quality milk to industry stakeholders for discussion and possible adoption.
% change in value of raw milk sold by SBOs under agreements that pay premiums for quality	2008	0	10%	0	
% change in gross revenue of SBO/MBCs from sale of inputs and services other than milk cooling (US $)	2008	US $ 715,209	10%	0	
Number of SBO/MBCs transformed into sustainable business entities	2008	0	10	0	
Number of cooling units installed/rehabilitated in SBO/MBCs (Number)	2008	0	5	0	
Component 3 - Availability of Dairy Business Development Services					
Number of firms providing new business services to producers (Number)	2008	0	50	0	
% change in value of Services/inputs provided by BSP (US Dollar)	2008	0%	5%	0	
Number of smallholders purchasing private sector services at full commercial rates	2008	0	5,400	0	
Number of new technologies or management practices made available for transfer	2008	0	5	0	
Number of producers receiving loans from financial service providers	2008	0	9,000	0	
% change in value of loans received from financial service providers	2008	0	5%	0	
Number of smallholders engaged in new, diversified dairy-related enterprises	2008	0	5,400	0	
Number of producers receiving short-term training	2008	0	5,400	0	

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