

# Info Note

## Private-sector led extension in Kenya's dairy sector

*Public private partnerships can play key roles in scaling up low emissions agriculture*

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### Key messages

- Kenya's dairy processors have begun to invest in providing extension services to small holder dairy farmers in their own supply chains. Investment has positive returns for both processors and farmers.
- Each processor is developing their own model of extension service delivery and financing that complements and supports the activities of local governments, farmer cooperatives and other input providers in different ways.
- The public sector can support private sector led extension by ensuring the provision of public goods (e.g. vaccinations, road infrastructure) and key input supplies (e.g. credit), and by supporting stakeholders to learn how to address critical social and environmental concerns, and by capturing lessons from pilot innovations to support scaling up.

Improving on-farm management practices to increase resource use efficiency and productivity can bring benefits for farmers' incomes, resilience and food security, while reducing GHG emissions from agricultural activities. Extension services (advisory and other technical services) play an important role in providing farmers with access to information on production practices, technologies, inputs and markets. Extension service provision is therefore a key mechanism to promote up-scaled adoption of climate smart agriculture practices.

In many countries, resources for public extension services are limited, and they are unable to reach the majority of farmers. In recent decades, pluralistic extension systems have developed, involving farmer organizations, NGOs and the private sector (FAO 2014). The private sector thus has key roles to play in both financing and delivering agricultural extension services for up-scaling climate action.

Until the implementation of structural adjustment programs in the 1980s, the government dominated provision of extension services in Kenya, after which direct delivery by government declined. Subsequent policies recognized the need to diversify and decentralize the provision of extension services. Since Kenya transitioned to the devolved system of governance in 2013, county governments have significant responsibilities in the agricultural sector, including the provision of demand driven extension services. Since then, although absolute expenditures on agriculture by national government have increased, they have accounted for a declining share of total budget expenditures, and agriculture expenditures have been low in many county governments' budgets (Njagi et al. 2014). A low ratio of extension staff to farmers (ca. 1:5,000) is indicative of the constraints on government capacities for service provision. In line with this 'new reality', national policies recognize the need for an increased role for the private sector in extension service provision. The National Agricultural Sector Extension Policy (2012) sets out a long-term goal of promoting private sector led and commercialized extension services. The National Dairy Development Policy (2013) also recognizes the importance of both public and private investment in extension and advisory services, with the government focusing on its regulatory roles.

### Development of private-sector led extension in Kenya's dairy sector

Many studies in Kenya have shown that a range of improved feeding, breeding, animal health and calf management practices can increase milk yields on small holder farms and that extension can increase adoption of these practices (Kiff et al. in preparation). Several donor-funded projects, such as the Smallholder Dairy Commercialization Programme (IFAD), East Africa Dairy Development Project (Heifer International) and Kenya Market-led Dairy Programme (SNV), have also

demonstrated that dairy farmers can greatly benefit from provision of extension services.

#### **Text Box 1: Dairy processor extension systems**

- **New KCC (NKCC)** has 54,000 long-term milk suppliers. Since 2014 NKCC has been piloting provision of extension services to its long-term suppliers funded from an extension contribution of KSh 0.5 per litre of milk procured.
- **Brookside** is the largest processor in Kenya, with an estimated 125,000 suppliers. Brookside facilitates linkages between private providers of advisory services and inputs and its milk suppliers.
- **Meru Central Dairy Cooperative Union** is a farmer-owned processor. It has about 9,500 regular suppliers, of whom about 5,000 have access to extension support from MCDCU and an international NGO-implemented project.
- **Mukurweini Wakulima Dairy Company** is a farmer-owned dairy processor with 6,500 regular suppliers. It began delivering extension services in 2014, and reaches about 300 farmers organized in farmer groups.
- **Githunguri Dairy** is a farmer-owned dairy processor with 22,000 members. It applies a rule that members must attend 75% of extension activities, and provides access to inputs and AI services.

Recently, Kenya's major dairy processors have also begun to invest in extension support to farmers in their supply chains (Text Box 1). Currently, about 57,000 dairy farmers – or 25% of the main processors' suppliers – have access to processor-led extension services. There is a clear business rationale for milk processors to expand extension service provision. Processing facility capacity utilization is often low (40-50%) due to the seasonality of milk supply and competition with the informal sector. Overcoming the seasonal dip in milk production during the dry season is one main focus of extension efforts. Provision of extension services and facilitating linkages with other input providers can also build loyalty of long-term suppliers. This helps processing companies to develop a stable source of supply and plan logistics and processing operations, reducing inefficiencies. In addition to processors, many dairy cooperatives provide training, advisory and extension services, and some also provide access to bulk-purchased inputs and to animal health and artificial insemination (AI) services provided by private businesses. Expanding extension coverage can increase cooperatives' milk intake and turnover, and increase their bargaining power with processors.

The financing and extension service delivery models being developed by dairy processors vary. While most processors allocate a regular budget to extension, one is piloting a system whereby extension activities are funded

from a fixed rate of KSh 0.5 per litre of milk procured from long-term suppliers. Some processors provide services through central in-house extension teams, others post extension staff with their supplier cooperatives, while some outsource extension to third-party providers. Several processors also provide guarantees to enable farmers and cooperatives to access credit, and enable farmers to finance purchase of inputs and technical services through a check-off system based on their milk supply records. Other providers facilitate linkages with service providers but services are purchased on a fee-for-service basis.

In all cases, provision of vaccinations is a responsibility of local government. Some processors also support dairy value chain multi-stakeholder forums at which coordination of investments by governments, cooperatives and processors is discussed. The Kenya Dairy Board, a statutory body mandated to regulate, develop and promote the dairy sector, also facilitates stakeholder forums at which issues such as milk quality are discussed.

### **Processor-led extension can be profitable, but effectiveness and equity can be strengthened through public sector support**

An analysis, supported by CCAFS and conducted as part of the preparation of a low-emission, climate resilient dairy development project in Kenya,<sup>1</sup> evaluated the financial viability of private-sector led extension and identified interventions to increase the reach and effectiveness of these private sector initiatives.

Current costs of extension service provision range between KSh 1,220 to KSh 23,000 per household per year. Variation in costs per household depends on which activities are financed through the extension budget, and on the number of farmers reached by each extension worker. Salaries of extension staff typically account for about 50-60% of annual extension costs, while staff transport and the costs of training and exchange visit activities account for most of the remainder. Some processors finance technical services such as AI or silage making through the extension budget, while in other cases these services are provided on a fee-for-service basis.

The assessment identified several areas where support could help processors to expand the reach and effectiveness of their extension services:

1. **Piloting new extension mechanisms:** Several processors have only recently engaged in extension service delivery and are still trying to identify effective delivery models. For example, uptake of silage making services fully funded by one processor has

<sup>1</sup> Also referred to as Kenya's dairy Nationally Appropriate Mitigation Action (NAMA)

been good, and it is now interested to explore phasing in fee-for-service provision. Another processor is interested to explore contracting of extension services to third party providers on results-based contracts.

2. Developing sustainable financing mechanisms for extension systems: Several processors are interested in the financing mechanism being piloted by New KCC whereby extension is funded from a fixed contribution per litre of milk procured. The appeal of this system is that extension budgets can be linked to performance, and extension budgets can be ring fenced from the overall budget of the processing enterprise.
3. Assistance in developing farmer monitoring systems: Information on farmers' practices and the performance of their dairy enterprises can improve farm-specific diagnosis of constraints and opportunities for improvement, and also provide feedback on extension system performance. Most processors only have rudimentary documentation systems at present, but are interested to integrate improved systems into their extension activities.
4. Developing gender-inclusive extension methods and extension modules addressing manure management and animal welfare: Women play key roles in dairy production and marketing. However, women often do not have equitable opportunities to benefit from technology, extension and marketing opportunities. Extension, animal health services and training may target men, even when the contents are relevant to women's roles on the farm.

Addressing gender-inclusivity in extension services can help increase adoption of improved practices and thereby contribute to an increased and stable milk supply. The relevance of gender-inclusivity for business is acknowledged by processors (Text Box 2). However, since gender-inclusive extension approaches is a new topic for all processors, they require assistance in identifying specific methods and practices to incorporate into their extension services. Similarly, addressing animal waste and animal welfare are new topics that have not been incorporated into the extension messages of most processors.

Financial analysis suggests that investments in expanding the coverage and effectiveness of processor-led extension services can be profitable both for farmers and processors. Expanded and enhanced services could potentially be provided at costs equivalent to between KSh 0.3 and 0.6 per litre of milk supplied, which most processors see as feasible at current milk prices. From a farmer perspective, if extension can increase yields by rates reported in some recent dairy development projects (i.e. 40-70%), these investments would have a significantly positive financial return. However, estimated returns are highly sensitive to assumptions about the costs of production, an issue that is already been explicitly addressed in most processors' extension activities. For processors, since gross margins

typically range between 15 and 20%, any increase in milk procured by would be profitable, indicating the positive incentives that processors have to invest in extension services to their milk suppliers.

#### **Text Box 2: The relevance of gender and youth issues for business**

A workshop attended by dairy processing companies explored the relevance of gender and youth issues to their businesses. Specific research questions were identified that could inform the design of gender- and youth-inclusive approaches in their extension activities. Priority questions of interest to different processors included:

- How do gender relations impact on productivity at the farm level?
- How do household members (men and women) make decisions about supply of milk to different formal processors or the informal market, and what factors impact on those decisions?
- What support to cooperative-based extension activities would increase opportunities and benefits for women?
- How are older and younger men and women involved in milk production, transport and supply?
- What options are there to assist young men and women to be more involved in different activities in the dairy sector?

Dairy processors have a keen interest in understanding these questions and identifying changes they can make to promote gender- and youth-inclusivity while securing sustainable growth for their businesses.

## **Conclusions and way forward**

A pluralistic extension system is developing in Kenya's dairy sector. Dairy processors have begun to invest in extension support to their suppliers, with each processor innovating different extension models suited to their own particular context. Extension services produce public goods, including employment, increased productivity and incomes for the poor and improved sustainability. These benefits justify support to these innovations from the public sector.

National and country governments can support private extension initiatives in several ways. The government has key roles in regulation, such as ensuring milk safety and quality, regulating the quality of input supplies, and accrediting the skills of technicians. It also makes critical investments in public goods such as transport infrastructure, which increases market access, and provision of vaccinations. Beyond these traditional roles, government can also support stakeholders to monitor, evaluate and draw key lessons from these private sector led initiatives, to facilitate learning and up-scaling of

extension approaches and practices that improve welfare and equity in the dairy sector.

With the costs of adapting to climate change in developing countries estimated at \$140-\$300 billion a year in 2030 – much of which will be in the agriculture sector – public private partnerships will need to be an essential element of national strategies to promote climate smart agriculture.

## References and further Reading

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