

KMAP: Milking profits for Kenya's dairy farmers

Small dairy farmers need a reliable supply of quality hay to improve their productivity and incomes. In Kenya, businesses have perceived the risks of investing in commercial hay production to outweigh the potential benefits, so the supply of quality hay has remained low. The Kenya Market Assistance Programme (MAP) is supporting commercial hay producers to respond to the demand from small farmers, by investing in machinery, distribution and soil testing. The initial business model, proven with a cooperative, has been adopted by others across the country.

Low quality feed leads to low productivity

Kenya's dairy sector is held back by low milk productivity among small dairy farmers, and the country imports significant amounts of milk powder as a result. Dairy farmers struggle with low quality feed, weak veterinary services, poor cattle genetics and weak integration with formal processors.

Launched in 2012, **MAP** is a 7-year DFID-funded programme taking a market systems approach to the dairy sector. MAP's analysis found that farmers were not making investments in their cattle, and lack access to the key inputs, such as hay, needed to increase their productivity.

In turn, service providers, who could potentially be providing hay, do not take smaller farmers seriously as legitimate customers. This kind of market failure is what economists call an 'information asymmetry'.

The level of milk output from a dairy cow is directly related to the quantity and quality of its feed. Getting enough hay, with the right nutrients, on a regular basis, is the basis for high milk productivity. Currently, many small Kenyan dairy farmers just

let their cattle graze on the available pasture. This leads to significant variation in the quantity of feed between rainy and dry seasons, not to mention highly variable quality. When farmers are desperate for hay in the dry season, they spend significant time and money to try and source it, often travelling long distances to do so.

Commercial production of hay requires expensive equipment (to plant, harvest and 'bale' the hay) as well as a strong distribution system to transport the bulky product to farmers. This business proposition has proven too risky, given the belief that farmers wouldn't be willing to pay, and so the supply of quality hay has lagged behind demand. Suppliers that do exist offer low volumes of variable quality hay that is only available sporadically.

Quality certified hay

MAP's vision was for a more productive dairy sector, built on a strengthened supply and demand for certified hay. This means a larger number of companies investing in commercial hay production to sell to small scale dairy farmers. To support this investment, hay producers needed financial services to afford reliable equipment. Farmers who make the investment in quality hay are rewarded with improved volumes of milk, increased income, and then are able to purchase more hay (and even more cattle) in the future.

Focus on high quality feed

MAP sought to find models for high quality, year-round hay production that would be easy for other businesses to copy. The project identified a pair of strong dairy cooperatives which wanted to improve their services to farmers. KMAP helped the coops to form a limited liability partnership, Hay and Forage (HnF), to produce quality hay. The programme subsidised some up-front costs for hay harvesting and processing (baling) in order to let the business prove its value. Initial sales were high, as farmers enjoyed the low price and high quality. Farmers in turn have seen their milk productivity increase, increasing demand for more hay in the subsequent season. This has led HnF to purchase the necessary equipment with its own resources, moving beyond reliance on the programme, to growing from its own profits. HnF's early success was key to prove the business case to other cooperatives and large farm owners.

Milk production up by a fifth

14 per cent more farmers are buying quality hay in target areas and their milk production has increased by more than 20 per cent as a result of the access to hay. Farmers save money, and during the dry season spend much less time travelling to find feed. In addition to MAP's work with HnF, five other large farms with a potential

land area of 3,000 acres have shown interest. One of these, SOCHON Ltd, is growing 800 acres of hay and hay seed itself and has contracted more than 2,690 acres via smaller farmers. To strengthen and reinforce this new group of hay producers, MAP has linked soil testing and fertilizer companies to hay producers to further increase hay productivity. The programme has also facilitated financing for HnF and SOCHON to purchase further equipment to expand its area under production. These signs, taken together, show that the supply and demand for certified hay are growing and that the market is changing to support the new business model.

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