Research Solutions Africa

Appendix 4: Retail Outlet Mapping

Study to identify viable business propositions for the dairy industry targeting lower income consumers

Introduction and Summary

- The retail outlet mapping is part of SNV's "Study to identify viable business propositions for the dairy industry targeting lower income consumers". Among the many objectives of this research was the following:
  - Do an inventory of the different suppliers of raw and processed milk (-products) in selected sampling areas in Nairobi, and describe outlets, products, volumes, packaging, prices and competition strategies.
- We visited 100 outlets in 3 high density areas in Nairobi to provide an inventory of their product range, prices, volumes and suppliers. Aspects not covered by this survey of 100 outlets were addressed on the basis of desk research (see "Appendix 3: Supply" to the main report).
- The main findings are:
  - Supermarkets sell the widest range of products, followed by dukas and kiosks
  - All type of outlets sell mala, raw and processed milk, although not each individual outlet. 80% of kiosks sell raw milk/13% sell pouched milk. This was 43% raw milk versus 53% processed milk for dukas and 37% raw versus 53% processed for supermarkets.
  - For processed milk, raw milk and sour milk (mala), dukas seem to be the most important stationary outlet type. Although supermarkets move larger quantities of all dairy products, due to their multiple presence in the high density settlements of Nairobi dukas form a powerful marketing and distribution network.
  - Worryingly, more outlets consider adding raw milk to their product range than processed milk. This seems to be related to the low quality/shelf life of pouched milk and the small profit margins. Both are considered as a barrier to selling milk.
  - Value added products, such as cheese or butter, are difficult to place in the market. Outlet owners claim that demand for such products is lacking.
  - Milk dispensers are not widely used. Only two respondents considered installing a milk dispenser.

Methodology of the Retail Outlet Mapping

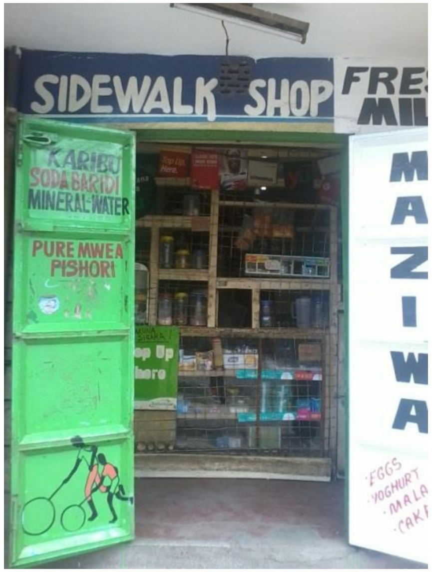
- We collected detailed retail outlet information in three high density areas of Nairobi:
  - Kawangware, Embakasi and Kayole
- The following information was collected:
  - Outlet type (Supermarket, Kiosk, Duka or local shop)
  - Name and physical location of each outlet, including GPS coordinate
  - Name of owner & phone number
  - Type of milk and milk products handled
  - Supplier Information (distributor, stockist etc.)
  - Store turnover per day (estimate)
- The collected information provides insights into the types and volumes of dairy products sold by different outlet types.
- The total sample size of 102 outlets visited constitutes a so-called dip stick. The sample is too small to sustain detailed empirical analysis. Statistical margins of error range from +/-16% for dukas to +/-33% for kiosks. This is in addition to any sampling and respondent biases. However, the outcomes do reflect the realities on the ground concerning relative orders of magnitude in the main variables observed.

Outlet Definitions

This report differentiates between three different types of outlets:

- Kiosks: semi-permanent structure with over the counter sales
- Dukas / Local Shops: permanent structure with over the counter sales
- Supermarkets: permanent structure with at least one till; consumers pick the goods

Kiosk

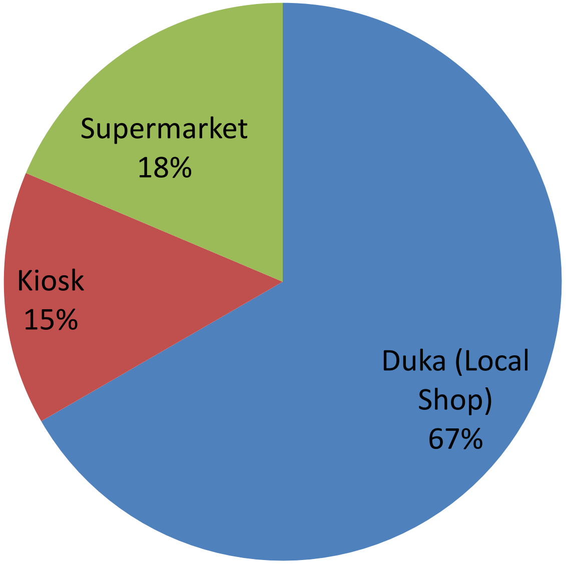


Duka

Supermarket

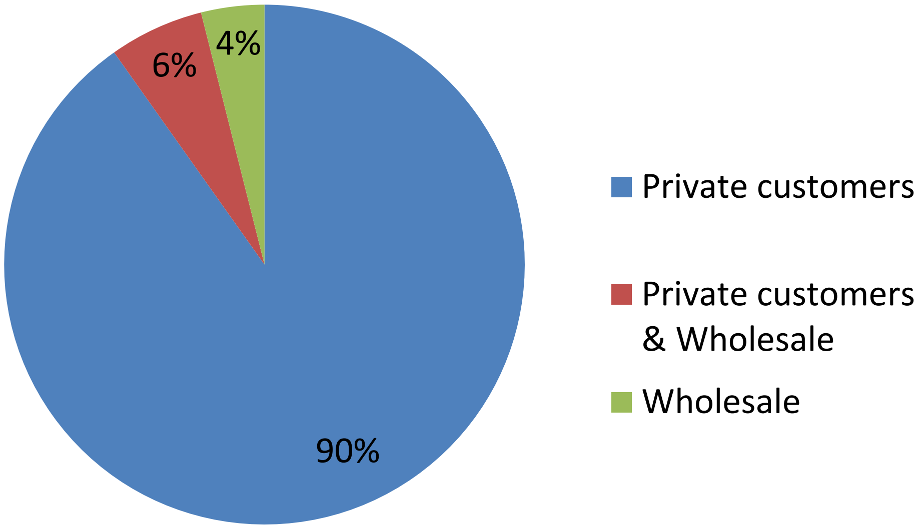
Demographics

Outlet type	**Embakasi**	**Kawangware**	**Kayole**	**Grand Total**
Duka (Local Shop)	23	21	24	68
Kiosk	7	6	2	15
Supermarket	9	6	4	19
Vendor/ hawker	0	0	0	0
Grand Total	**39**	**33**	**30**	**102**



- We mapped 102 outlets, each selling at least one dairy product.
- Our sample contained no hawkers. This is due to the randomizing strategy (skip pattern), which omitted mobile vendors.
- Due to the small sample size, the distribution of the 102 outlets is not representative of the actual presence of outlets in the area.

Wholesale versus Retail



Of all outlets mapped

- 4% claimed to be wholesalers, only.
- 6% claimed to serve commercial (wholesale) and private clients.
- We estimate the number of actual wholesalers in the sample (not necessarily on the ground) to be even lower, as retailers like to claim being a wholesaler to raise their profile.

Product handling per outlet type (overview)

	Kiosk (n=15)		Duka / Local Shop (n=68)		Supermarket (n=19)	
Products Handled	**Consider Selling**	**Selling**	**Consider Selling**	**Selling**	**Consider Selling**	**Selling**
Butter	60% (=9)	0%	40% (=27)	3% (=2)	47% (=9)	11% (=2)
Cheese	60% (=9)	0%	41% (=28)	1% (=1)	47% (=9)	5% (=1)
Cream	60% (=9)	0%	41% (=28)	0%	42% (=8)	5% (=1)
Ice Cream	53% (=8)	7% (=1)	41% (=28)	1% (=1)	32% (=6)	21% (=4)
Powdered Milk	60% (=9)	0%	38% (=26)	4% (=3)	16% (=3)	58% (=11)
Processed Milk	47% (=7)	13% (=2)	12% (=8)	43% (=29)	11% (=2)	53% (=10)
Raw Milk	7% (=1)	80% (=12)	31% (=21)	53% (=36)	37% (=7)	37% (=7)
Sour Milk (mala)	33% (=5)	53% (=8)	22% (=15)	60% (=41)	16% (=3)	58% (=11)
Yoghurt (flavoured)	53% (=8)	20% (=3)	19% (=13)	65% (=44)	11% (=2)	74% (=14)
Yoghurt (unflavored)	33% (=5)	40% (=6)	31% (=21)	31% (=21)	32% (=6)	21% (=4)

- The table shows the products currently sold by type of outlet (see: column “selling”) and what the outlets would consider to add to their product range (see column “consider selling”).
- The actual number of outlets selling or considering to sell a given product in our sample of 102 outlets is given in brackets after each percentage.

Product handling per outlet type (observations)

- Dukas and supermarkets are actually more likely to consider adding raw milk to their product offering than processed milk! This indicates a need for the KMDP programme.
- The consideration to add/sell a new product must be interpreted with a pinch of salt. Our respondents were quite clearly over-reporting their degree of openness to other products. We deduce this from the fact that willingness to consider is almost constant across the product range, as well as from enumerator feedback.
- Kiosks sell the smallest range of products (mostly yoghurt, milk and sour milk).
- This is followed by dukas, where we observe a larger share of processed dairy products (milk and flavoured yoghurt).
- Supermarkets offer the widest range. However, luxury items with a high urgency to refrigerate (butter, cheese and cream) are only rarely sold.
- Raw milk is mostly sold by kiosks, followed by dukas and supermarkets. For processed milk, the opposite is true, reflecting the increasing degree of ‘formality’ from kiosks to supermarkets.

Product volume moved per day by outlet type (overview)

	Total units moved per day by channel			Average units moved per outlet per channel		
Product Handled	**Kiosk**	**Duka (Local Shop)**	**Supermarket**	**Kiosk (n=15)**	**Duka (n=68)**	**Supermarket (n=19)**
Butter	-	30	15	-	15 (n=2)	8 (n=2)
Cheese	-	8	1	-	8 (n=1)	1 (n=1)
Cream	-	-	56	-	-	56 (n=1)
Ice Cream	20	32	103	20 (n=1)	32 (n=1)	26 (n=4)
Powdered Milk	-	65	**185**	-	22 (n=3)	**17 (n=11)**
Processed Milk	25	**1,050**	**411**	13 (n=2)	**36 (n=29)**	**41 (n=10)**
Raw Milk	**465**	**1,706**	**680**	**39 (n=12)**	**47 (n=36)**	**97 (n=7)**
Sour Milk (mala)	**99**	**1,307**	**338**	**12 (n=8)**	**32 (n=41)**	**31 (n=11)**
Yoghurt (flavoured)	47	**921**	**1,307**	16 (n=3)	**21 (n=44)**	**93 (n=14)**
Yoghurt (unflavoured)	**87**	**269**	139	**15 (n=6)**	**13 (n=21)**	35 (n=4)

- The right hand part of the table shows the number of units sold per outlet stocking a given product (e.g. dukas that sell processed milk – 29 out of 68 dukas sampled – sell on average 36 units of processed milk per day each.
- The left hand side multiplies the 36 packets by the 29 dukas in our sample stocking processed milk to give a channel volume of 1,050 in our sample of 68 dukas in total. The numbers do not reflect actual absolute channel volumes in the market. These would be much bigger. But the relative size of the channel volume is our sample is a rough indicator for relative sample sizes in the market.
- The margins of error in both parts of the table are significant due to the small sample sizes. Actual volumes per outlet printed in bold can be up to 40% higher or lower than found in our sample. For grey printed values, the margin of error is even bigger. The channel volume levels are even less accurate.

Product volume moved per day by outlet type (observations)

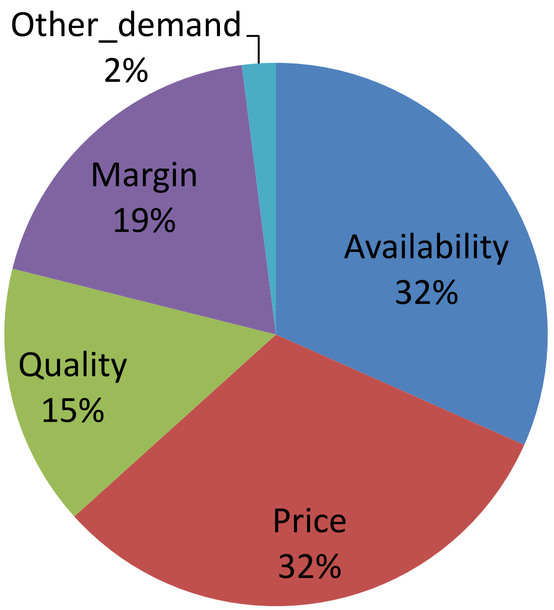
- Fresh milk, mala (sour milk) and yoghurt are the most important products for every outlet type.
- Supermarkets and dukas are both important channels for dairy products. Kiosks only play a significant role in the sales of raw milk, unflavoured yoghurt, and to some degree sour milk (mala).
- While supermarkets generally sell more units of every product they stock than a duka would, there are many more dukas in Nairobi's high density areas. This effect of larger numbers makes dukas a powerful channel for many products.

Supply of products

Channel of Distribution	Outlet Type		
	Duka / Local Shop (n=68)	Kiosk (n=15)	Supermarket (n=19)
Delivery van	18	0	6
Farmer	3	7	0
Middle man	53	7	8
Wholesale	13	3	5

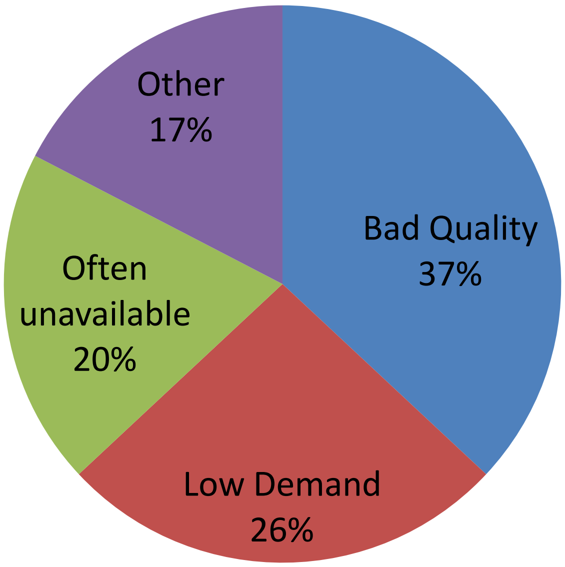
- Most dukas and some kiosks in our sample have more than one supplier for their dairy products, emphasizing the ambition to find the best source.
- About half of all kiosks in our sample source at least some dairy products directly from farmers.
- 78% of all dukas use middlemen as one of their channels of supply. Given the volumes sold through dukas, the role of middle men in serving efficient markets should not be dismissed.

Drivers for selling a product



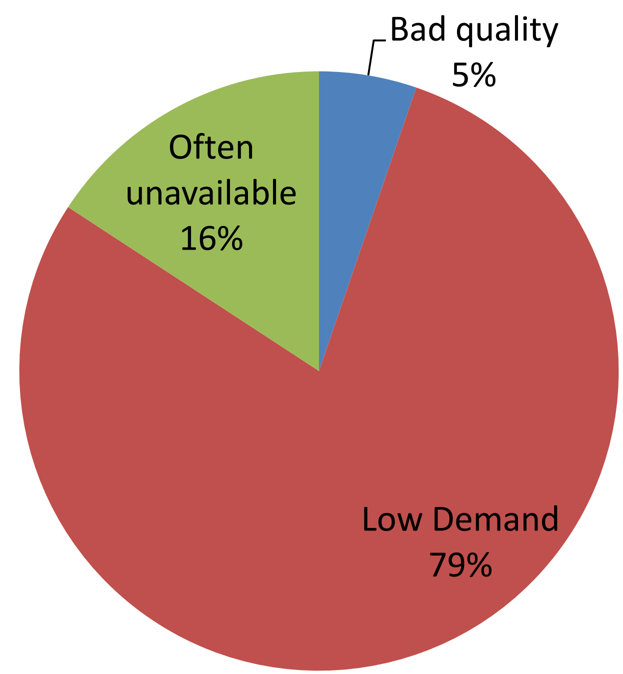
- A combination of availability of a product, its price, its quality and the retail margin are the main decision factors on whether to stock a product or not.
- Demand was only mentioned twice. Given that mostly large volume basic dairy products are being sold, the ability to source the product competitively takes precedence over the customer demand in the decision process whether to stock the product.

Barriers to selling milk



- Bad quality is a major barrier to selling milk (37%), as well as a lack of availability (20%). Many outlets would sell it if they could consistently source good quality.
- While high demand was not mentioned as a motivator, low demand has been mentioned as a major barrier to selling milk.
- Other barriers mentioned include:
  - milk sours before the expiry date
  - low profits/returns on milk.

Barriers to selling value added dairy products



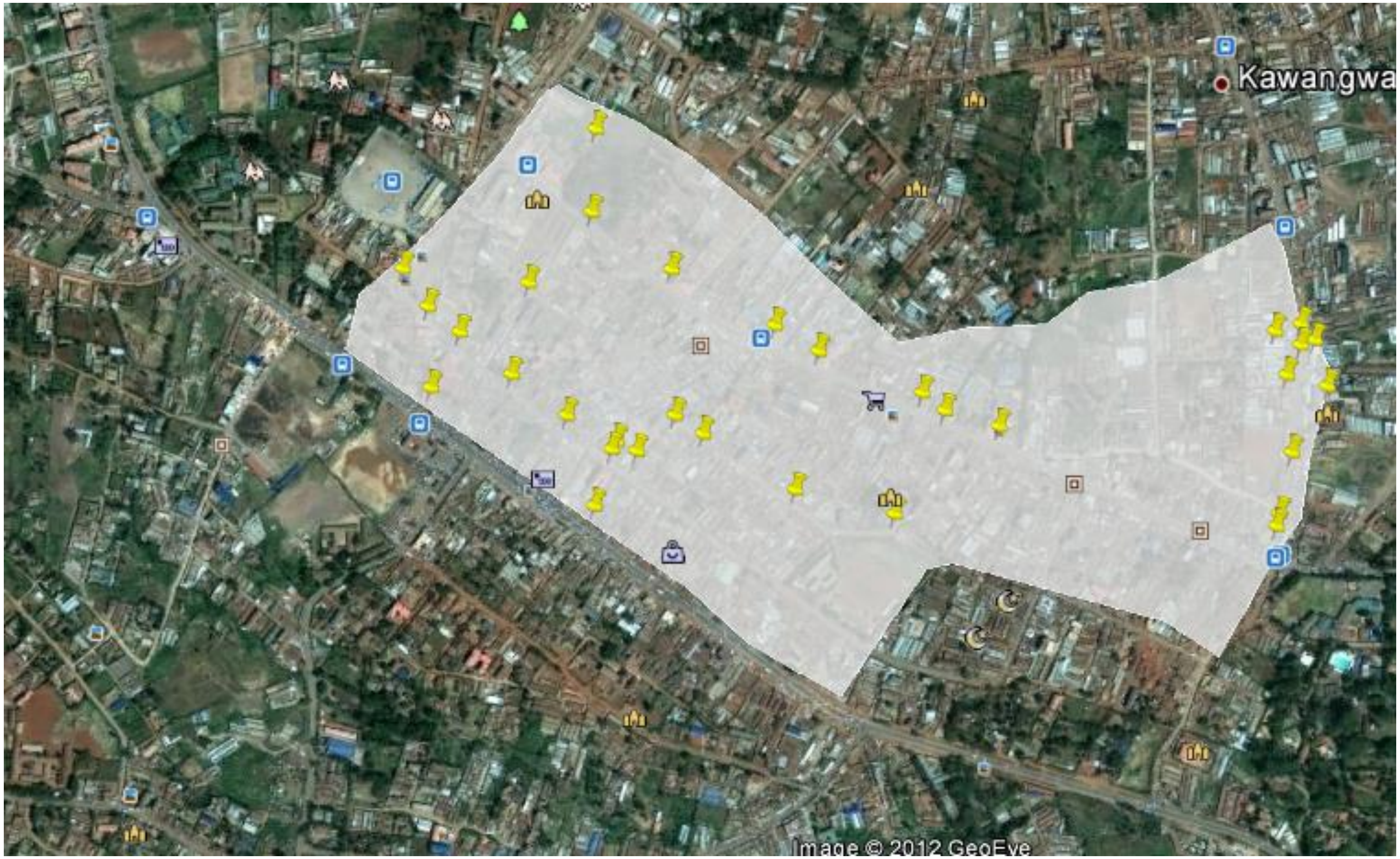
- Low demand is the most important barrier to selling valued added dairy products, beyond liquid fresh milk. To introduce such products in the market would require a tremendous effort of consumer education in addition to establishing the product among outlet owners.

Milk dispensers

One objective of the study was to understand the potential of milk dispensing units, one technology with the potential to reduce costs while improving the quality of the milk delivered.

- We encountered no milk dispensing units in our target areas.
- Only two of our respondents had considered milk dispensing units. They had dismissed the idea.
- On the basis of this data, we can’t draw meaningful conclusions about milk dispensing technology.

Geographical representations of the outlets mapped. kawangware (33 outlets)



- By clicking on a marker, information on the outlet is displayed in a pop up window
  - Type of outlet, GPS coordinates, Name of outlet etc
- Using Google Earth we can anchor a particular point as our centre and get directions to any other point

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Geographical representations of the outlets mapped.
Embakasi (39 outlets)

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Geographical representations of the outlets mapped. (Kayole 30 outlets)

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Questionnaire

- The actual questionnaire was executed using electronic data capture. Our data collection software was used on hand held devices carried by our enumerators. Below, we outline the questionnaire.

1.	Gps coordinates	
2.	Date and time taken	
3.	Location	1. Embakasi 2. Kawangware 3. Kayole
4.	Outlet Name (Either formal or informal)	
	a. Formal name	
	a. Informal name	
5.	Street name(Precise location/landmark)	
6.	Outlet type	1. Kiosk 2. Duka (Local Shop) 3. Supermarket 4. Vendor / Hawker
7.	Respondents name	
8.	Respondent's telephone number	
9.	Do you sell milk/milk products?	1. Yes 2. No (terminate)
10.	Do you sell mostly to private customers or wholesale?	1. Private customers 2. Wholesale

Questionnaire continued

<table>
<tr><td rowspan="1"></td><td>What type of milk products do you sell?</td><td colspan="2">(1) Raw milk; (2) Processed Milk (flavoured); (3) Unprocessed milk (flavoured); (4) Milk powder; (5) Yoghurt (unflavoured); (6) Yoghurt (flavoured); (7) Sour Milk (mala); (8) Cheese; (9) Cream; (10) Margarine; (11) Butter; (12) Ice Cream; (13) Other dairy products (cooled); (14) Other dairy products (uncooled)</td></tr>
<tr><td rowspan="2"></td><td rowspan="2">How many units of these products are sold in a day (estimate)</td><td>Products</td><td>Quantity per product (units)</td></tr>
<tr><td>(1) Raw milk; (2) Processed Milk (flavoured); (3) Unprocessed milk (flavoured); (4) Milk powder; (5) Yoghurt (unflavoured); (6) Yoghurt (flavoured); (7) Sour Milk (mala); (8) Cheese; (9) Cream; (10) Margarine; (11) Butter; (12) Ice Cream; (13) Other dairy products (cooled); (14) Other dairy products (uncooled)</td><td></td></tr>
<tr><td></td><td>Where do you get your milk or milk products from? (Multiple choice)</td><td colspan="2">(1) Wholesale; (2) Middle man; (3) Delivery van; (4) Farmer; (5) Others</td></tr>
<tr><td></td><td>What is the most important motivation to select the brands that you sell? (Multiple choice)</td><td colspan="2">(1) Price; (2) Margin; (3) Quality; (4) Availability; (5) Others / specify .1; (6) Other specify .2</td></tr>
<tr><td></td><td>Have you considered selling (offer un-ticked options in Q11 above)</td><td colspan="2"></td></tr>
</table>

Questionnaire continued

	List three barriers to selling milk and milk products	
	a. Selling milk	1. Low demand 2. Bad quality 3. Often unavailable 4. Other
	a. Selling Milk products	1. Low demand 2. Bad quality 3. Often unavailable 4. Other
	Have you ever considered selling milk through milk dispensers?	1. Yes 2. No

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Thank You

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