PURCHASING PATTERNS OF MILK AND POULTRY IN RURAL LOWLANDS OF LESOTHO

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Abstract

A survey of milk and poultry purchases was made of villagers and cafe owners in a rural lowland area of Lesotho. The purpose of the survey was to: 1) assess the current local market demand, 2) obtain baseline information on purchases of these products, 3) test a methodology for doing rural market surveys. The survey area was selected because it was a potential site for new milk or poultry production. Villagers were systematically selected (every 5th) from a list of names provided by the village chief, and interviewed by enumerators. Villagers were informed as to the purpose of the survey and were forthcoming as to current and potential future purchases. Responses concerning current purchases seemed reasonable and reliable, however, responses concerning future purchases seemed to be over stated. Most of the milk purchased was long life, followed by fresh unpasteurized, sour milk and other types of milk. In contrast fresh milk was preferred to long life by a ratio of 5 to 1. Most of the poultry purchased was live chickens, followed by whole frozen and frozen chicken parts, preferences were also in this order. Purchases of milk was inelastic relative to household cash income, household surplus income and household size. Purchase of milk did not increase with increasing per capita income (household income divided by household size). As income rose, purchase of poultry also rose. The elasticity of poultry purchases was evident with increasing household income. Salary income or surplus income were poorer predictors of poultry purchases than total income. This suggests that income from non-salaried sources (sale of beer, crafts, and business) was preferentially spent on poultry.

1. Introduction

Food purchase patterns and preferences are key factors in planing new production and marketing of agricultural commodities. The divisions of Agricultural Research, Livestock and Range are involved in providing detailed recommendations to individuals wishing to develop milk and poultry production enterprises. Some types of small scale animal production would likely require transport of animal products to population centres for slaughter and sale, examples being lamb fattening or swine production. In these cases the product can be transported infrequently and thus efficiently to the population centres. For other products, such as milk and poultry, which are produced more often and for small scale production the transportation costs from the rural area to population centres can represent an excessively large share of total production costs. For this reason production of milk and poultry may be more profitable if the animal products can be sold locally.

The problem with localized marketing of agricultural products is that these markets can saturate the demands of the relatively low population levels. This results in difficulties of selling, either as unsold product which spoils, depressed prices, or in the case of broiler chicken, longer maintenance of animals and higher feeding costs.

The purpose of this survey was to obtain some baseline information on milk and poultry consumption by rural populations.

2. Survey methods and area description

An area surrounding the village of Ha Nchela was chosen for survey as it was targeted for development of intensive livestock production. This area is classified as lowlands. Ha Nchela is located on a good quality gravel road which is 3 km past the paved road and enjoys relatively good access to the commercial centres 32 km away.

From 18 villages, local chiefs were requested to provide a list of resident household head names, one out of five names were selected. Household heads from 156 of 733 households were interviewed by research enumerators. The survey was conducted during the months of July and August of 1989. Purchases during these winter months, when animal production is low, could have had an effect on the responses given.

2.1 Household Characteristics

In most cases a female household head provided the survey responses. The average household had 2.5 children living at home, plus an average of 3.2 other people. According to Bureau of Statistics (1987) the average lowland household size is 5.3. Using the 5.7 people per household figure puts the total population in the sampled market area at 4210.

Most of the households (60 per cent) had income from sources other than agriculture. According to Bureau of Statistics (1987) figures in the rural lowlands 58 per cent of the families had salary incomes. In this survey 30 per cent of households had salary income from South Africa, 12 per cent in the village area and 21 per cent from employment elsewhere in Lesotho. Three quarters of the households had income in prior years from South Africa. Total monthly household income outside of agriculture was M 211 per month. In comparison, Bureau of Statistics (1987) 1986/87 figures for cash income, (adjusted for inflation by Central Bank of Lesotho (1989) data), was M 310 for the rural lowland areas.

Table 1. Summary of Average Milk Purchases and Price

	Monthly Household Milk Purchases				
	Total Population		Of those who bought the type of milk		
	Amount Purchased		Amount	Purchased	Average Price
	(Litres)	(Maloti)	(Litres)	(Maloti)	(Maloti/l)
All Milk	4.50	7.18	N/A	13.95	n/a
Fresh Milk	1.03	1.10	7.3	8.03	1.10
Long Life	2.96	5.50	9.1	16.77	1.86
Pasteurized Fresh	0.10	0.14	4.0	5.68	1.42
Other Liquid Milk*	0.41	0.44	7.2	7.77	1.08

* Mostly sour milk

2.2 Expenses

School fees averaged per month at M 16.82, most households spending less than M 5.00 per month. This compares to M 7.59 for inflated Bureau of Statistics (1987) figures. Monthly spending on food and fuel amounted to an average of M 86.05, with most spending M 50.00 or less. Expenditures at this low level leaves little to be used for purchasing milk. Total household expenditures were M 126.79 per month. This is significantly lower than the inflated figure from Bureau of Statistics (1987), M 240.

3. Results - Milk purchasing patterns

Approximately half the households said they purchased milk on a regular basis. Of those which did not purchase milk regularly; 13 per cent already owned cows, 11 per cent thought milk was too expensive, 7.7 per cent did not want it, 1.9 per cent said it was unavailable, and the rest gave no reason.

Total expenditures on milk per month per household averaged M 7.18 among all households, the milk-purchasing households spent M 13.95 per month, see Table 1. This indicates that those households which buy milk spend a sizable amount of their food and fuel budget on milk.

3.1 Fresh milk

Purchase of fresh unpasteurized milk purchases averaged 1 litre per month per household across the population. Those that purchased fresh milk bought 7.3 litres per month per household, giving an average expenditure of M 8.03 per month. Half of the buyers of fresh milk purchased 5 litres per week. These people constituted 14 per cent of the population. Average price for fresh milk was M 1.10 per litre.

3.2 Long life milk

Monthly purchases of long life U.H.T. (Ultra High Temperature) milk averaged 3 litres per household in the sampling area spending an average of M 5.50. Purchasers of this milk bought 9.1 litres per month per household, giving an average expenditure of M 16.77 per month. Half of the purchasers of long life milk bought 5 litres or less per week. These people constituted 32.7 per cent of the population. Long life milk was the highest priced of the four liquid milk types surveyed.

3.3 Fresh pasteurized and other types of milk

Only 2.5 per cent of the population bought pasteurized milk. These households bought an average of 4 litres per month. In the category of "Other Milk", monthly household purchases were 0.4 litres. Most of this milk was "Mafi" or sour milk. Only 5.6 per cent of the population, indicated they purchased milk in this category. Powdered milk was only purchased by 0.7 per cent of the population, this was a surprisingly low number considering the wide availability of this type of milk.

3.4 Milk Preferences

Respondent preferences for milk contrasted to the purchase pattern of milk, see Figure 1. While the majority of milk bought, either on a monetary or physical basis, was long life; preference for fresh milk was greatest. Respondents preferred fresh milk to long life 5 to 1, while they purchased fresh to long life at 1 to 5. Similarly, preference for sour milk was much larger than actual purchases.

3.5 Milk Points of Purchase

Most people purchased their milk from local cafes (26 per cent) followed by from their neighbours (13 per cent). Of the total population less than 2 per cent got milk from a cafe which was "far away" and only 6 per cent purchased milk in "town", while 4 per cent got milk from a development project 15 km away. Thus 12 per cent of the households obtained milk from a relatively distance source.

3.6 Milk Availability

Most people did not have a problem finding milk. Respondents "never or rarely" had difficulty finding milk to buy 84 per cent of the time when they made an attempt. Fifteen percent of the time people responded that they "sometimes", "often" or "most of the time" could not find milk when they wanted. On average respondents said they could not find milk when they wanted it 0.7 times a month.

3.7 Household Characteristics and Milk Purchases

Total purchases of milk have a low household income elasticity. Figure 2 shows the household purchase of milk as a function of total household income. These households tended to spend up to M 30 per month, most household not exceeding this. Although this does represent approximately 0.5 litres per day per household. The relationship between salary income, surplus income (total income minus total expenditures) or per capita income was less statistically significant than total household income.

Correlation of increasing milk expenditures with total household size is low, see Figure 3. Overall the consumption of milk increases with increasing household size then drops off, the drop off would be expected as large households would tend to have more children and less per capita income.

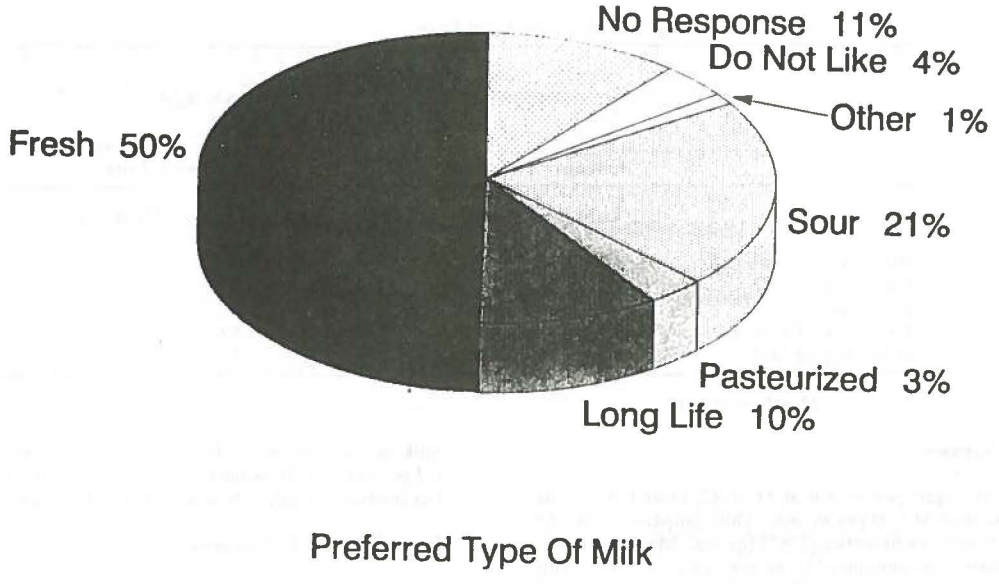

Figure 1: Preferred type of milk indicated by respondents.

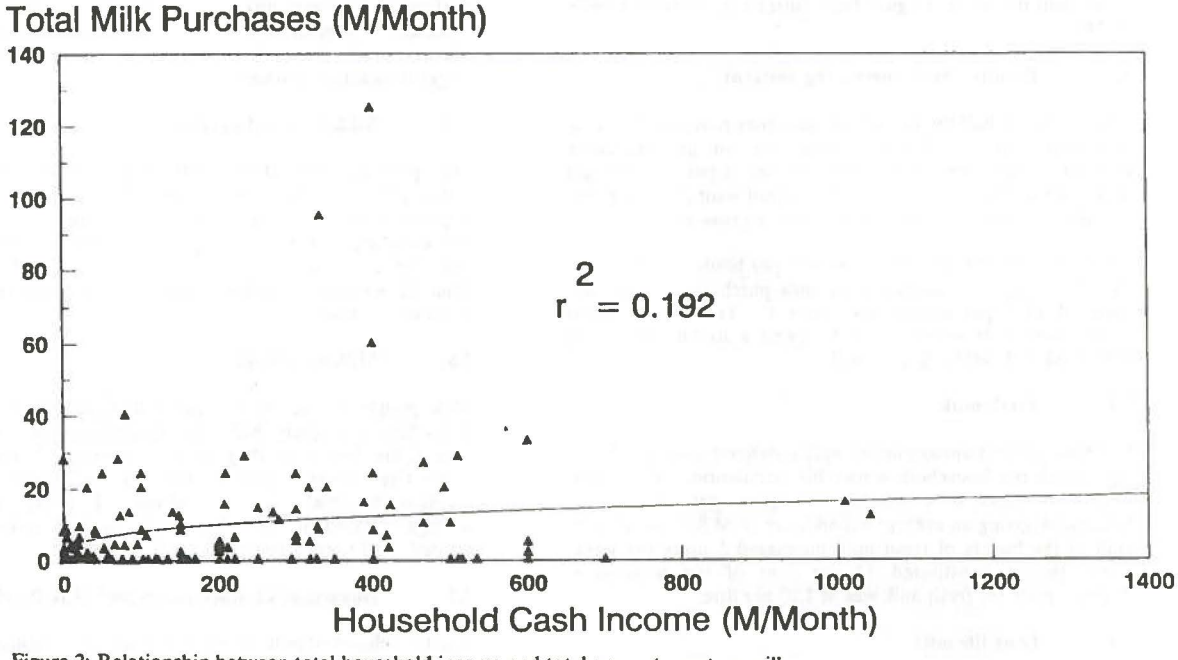

Figure 2: Relationship between total household income and total amount spent on milk.

4. Results - Poultry purchasing patterns

Broiler chickens were regularly purchased by only 37 per cent of the households. The reasons cited by most people why they did not regularly buy chicken were "they already owned chickens" 40 per cent, or that they felt chickens were "too expensive", 14 per cent. This latter reason is expected since the price of one chicken equates to an eighth of the average monthly food and fuel budget. Less than one percent did not purchase because of a lack of availability. Total expenditures on chicken per household were M 9.37 per month, see Table 2. Of the chicken-buying households, expenditures were M 28.78 per month.

4.1 Whole live chicken

Whole live chicken purchases averaged 0.66 units per household per month. Those who bought chickens spent M 26.45 per month. These buyers tended to buy one, two or four chickens per month. Whole chicken was the highest priced of the four types surveyed.

4.2 Whole frozen chicken

Whole frozen chicken purchases averaged 0.22 units per household per month, of those who bought chickens they spent M 26.64 per month. And these chicken buyers tended to buy the same number of units as those who bought live chickens.

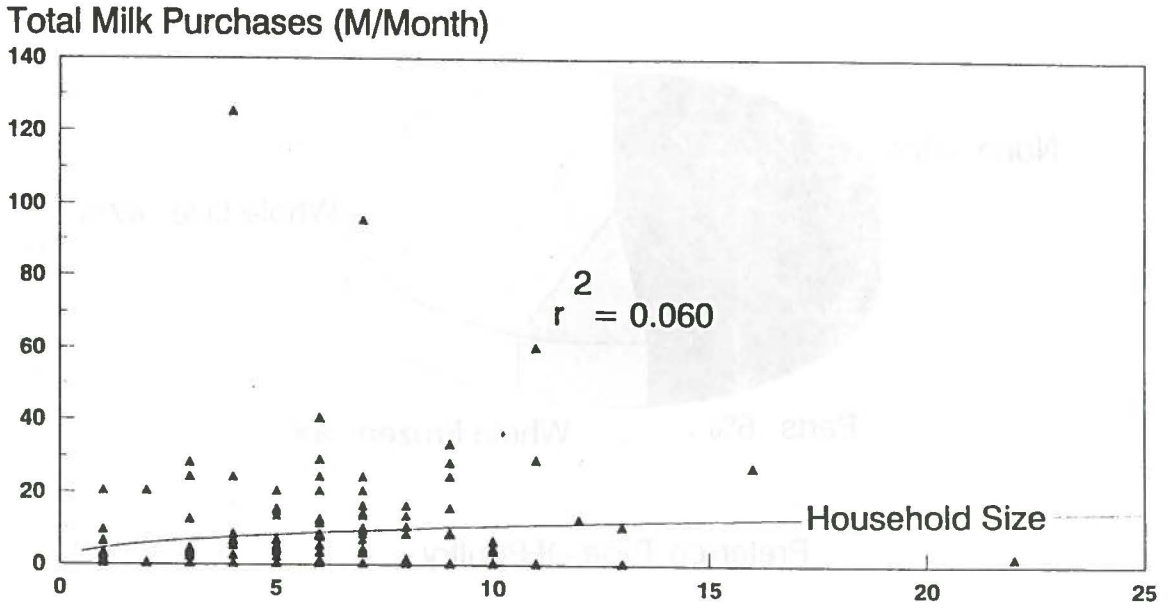

Figure 3: Relationship between household size and total amount spent on milk.

Table 2: Summary of Average Poultry Purchases and Prices

Type of Chicken	Monthly Household Purchases Total Population Amount (Units)	Total Population Purchased (Maloti)	Of those who bought Chicken Amount (Units)	Of those who bought Chicken Purchased (Maloti)	Price (Maloti/Unit)
All Chicken	N/A	9.37	N/A	28.78	n/a
Whole Live	0.66	6.45	2.7	26.45	9.81
Whole Frozen	0.22	1.95	3.0	26.64	8.88
Breast or Leg Parts	0.32	1.04	5.0	16.32	3.26
Head or Feet	0.00	N/A	0.0	N/A	n/a

4.3 Chicken breast, leg, thigh and other parts

Average purchases of the breast, leg and thigh (BLT) parts were 0.32 packets per household per month. The purchasers of BLT parts bought an average of 5 BLT packets per month. The size of the packets of BLT parts varies considerably and they are sold based on weight. No one in the survey indicated they purchased the head, feet or offal. Although these parts are available in the local cafe's they apparently are purchased by a relatively small segment of the population.

4.4 Poultry Preferences

There was a clear preference for the purchase of live chickens, see Figure 4. Respondents preferred live to frozen six to one and preferred live to BLT parts 75 to 1. This preference does not match closely with the buying patterns which are two or three to one in favour of live chickens. It suggests that new local sources of live chickens would compete strongly against the current supply of frozen chickens and parts.

4.5 Broiler Points of Purchase

One of the tasks of this survey was to determine the amount of poultry which was being imported to the survey area and the amount which was locally produced. To accomplish this villagers were asked where they purchased poultry and where the poultry seller got the chickens. Across all types of poultry, live, frozen or BLT parts most people got poultry from their neighbours, 10.8 per cent, followed by from town 9.6 per cent, 6.4 per cent from local cafes and 6.6 per cent from multiple locations. In about one third of the cases where chickens were purchased from neighbours they originally came from "town" or "large farms". And about one quarter of the cases where chickens were said to be purchased from local cafe's originally came from "town".

4.6 Broiler Availability

A large majority of respondents indicated they "never" or "rarely" had difficulty finding chicken when they searched to buy it. But 10.9 per cent of respondents said they "sometimes", "often" or "most of the time" had difficulty finding chickens when desired. On average respondents could not find chicken 0.5 times per month

4.7 Flock Size and Household Sales

Households owned an average of 7 chickens each. A third of the households did not own any chickens at all. And flock ownership was broadly distributed from one to forty per household. Off-Take sales averaged 1.8 chickens per month. Consumption of home-raised poultry averaged one per household per month, it appears that households sell more of the chickens they raise than they consume.

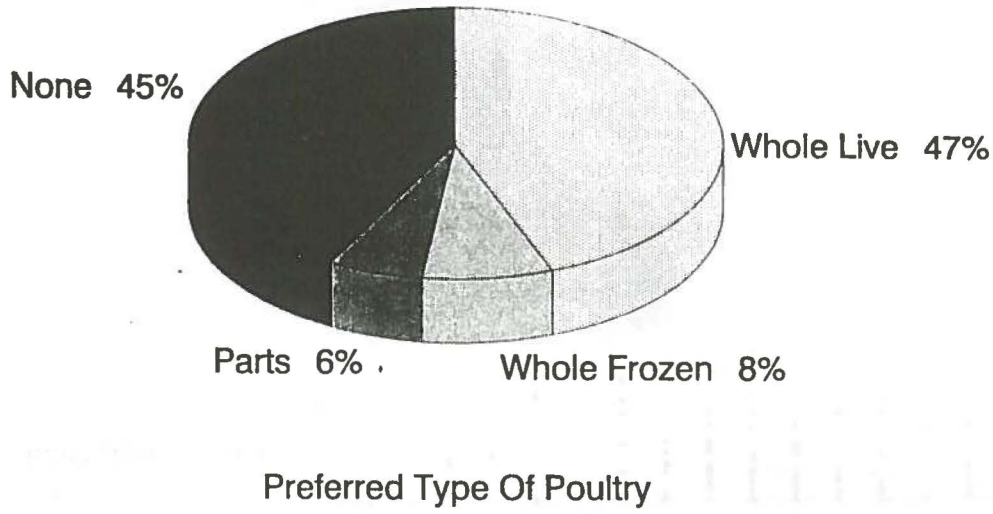

Figure 4: Preferred type of poultry indicated by respondents.

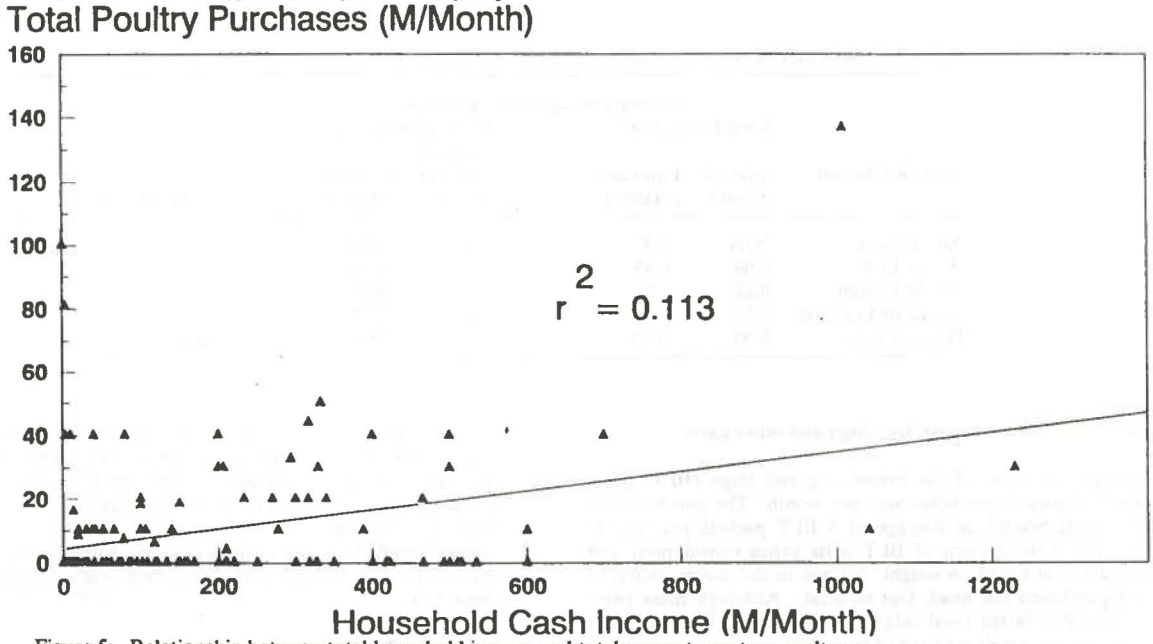

Figure 5: Relationship between total household income and total amount spent on poultry.

4.8 Household Characteristics and Poultry Purchases

Relating the total purchases of poultry to the household cash income shows an imprecise but expected increase in poultry purchases as the income increases, see Figure 5. If households which do not purchase any poultry, because of their own production were removed, the relationship would be even more evident. Poultry purchases appeared to be more income elastic than milk purchases. Household per capita income, surplus income, salary income correlated less than total household income. This suggests that income from the non-salaried sources (sale of beer, crafts, and business) included in total income was preferentially spent on poultry.

A relationship of increasing poultry expenditures with increasing household size appeared to be rather weak, see Figure 6. Except for the tendency of the poultry purchases to be low for households of 1 or two people, household size would be a poor predictor of poultry purchases.

5. Summary

Purchase of milk or poultry made up a modest proportion, 5 to 7 per cent, of total household expenditures. While long life milk was the most commonly purchased, the respondents strongly preferred other types of milk, fresh or sour. Similarly a preference for whole live chicken exceeded that actually purchased. Local producers were more effective at supplying demand of poultry than for milk. Neither household income data nor household size correlated closely with the purchase of either milk or poultry.

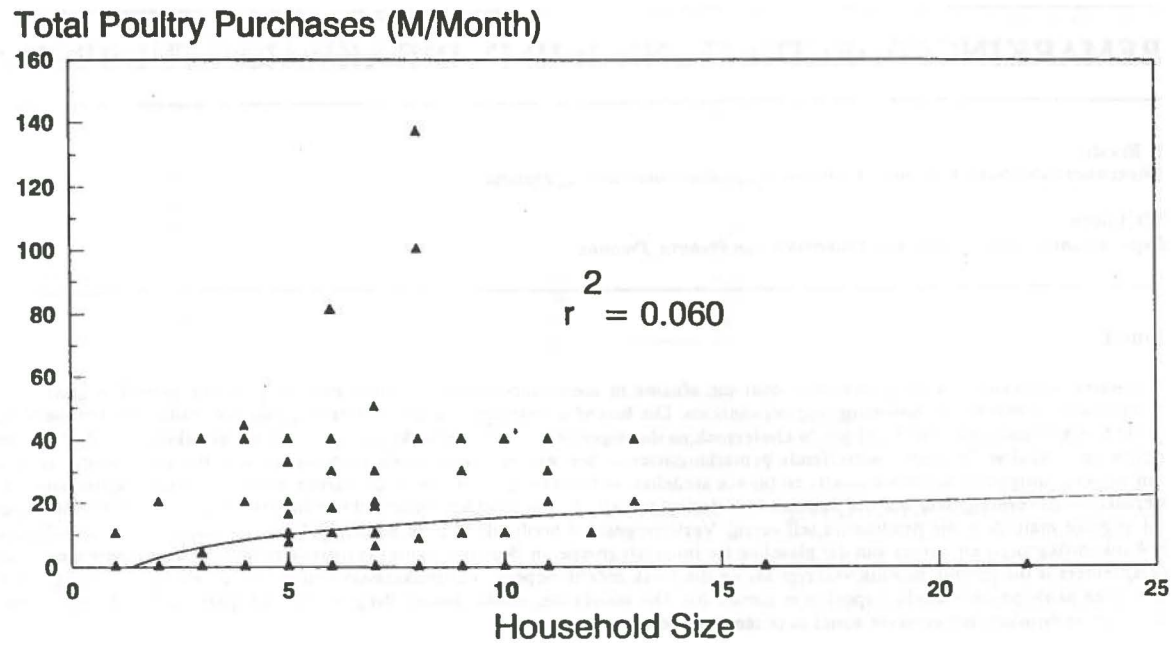

Figure 6: Relationship between household size and total amount spent on poultry.

Note

The authors wish to thank the United States Agency for International Development for support necessary to conduct this study. The opinions expressed in this paper are those of the authors and do not necessary represent those of USAID.

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