Market niches for increased small ruminant production in southern Nigeria

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The humid zone of southern Nigeria has an estimated 9 million small ruminants, largely consisting of trypanotolerant dwarf goats and sheep. In spite of this, aggregate demand for small ruminant meat in the zone exceeds supply from local sources and the gap is met by supplies from the subhumid and semi-arid zones in the north of the country. Such supply–demand imbalance has important implications for increased small ruminant production in the humid zone. This study examines the scope for such increased production in southern Nigeria using data from a year-long survey of selected rural markets in south-west and south-east Nigeria.

The study sites

Four periodic rural markets were monitored, two each in south-west and south-east Nigeria. The south-west markets were functionally independent in that their supply hinterland and service areas were largely different. In contrast, the south-east markets were functionally related, but not dependent, since their supply hinterland and service areas overlapped to some degree.

Except during the June–July 1990 Muslim festival of Eid-el-Kabir, detailed information was collected for all small ruminants traded in the markets between December 1989 and January 1991. The detailed records apply to 4504 small ruminants in the south-west and to 956 in the south-east.

Study results

The survey data showed that supplies and sales exhibited differential patterns in the rural markets studied. In the south-west, supplies and prices peaked in June–July coinciding with Eid-el-Kabir, and to a lesser extent in December during Christmas–New Year. In the south-east, festivals did not attract much additional supply and no major peaks in supplies or prices were observed, except in December. This may be partly due to the fact that fewer animals were bought by consumers in the south-east who relied more on home-reared animals.

In the south-west, average supply per market day was 2.5 times higher than in the south-east. But, the actual number of animals traded on a normal market day were about the same in the two regions. During the normal period, animals of southern origin constituted 72–89% of supplies and 75–84% of sales in the south-west the equivalent proportions in the south-east being 97.4% and 98.6%, respectively.

There were only two categories of sellers consisting of farmers and traders, and several categories of buyers including farmers, traders, butchers, food caterers and consumers. Records of individual transactions showed that in the south-west, 76.2% of the animals were sold by farmers and 23.8% by traders; the
equivalent proportions for the south-east being 98.3% farmers and 1.7% traders. In general south-east markets served as a supply source for urban markets, while south-west markets served the needs of a wide variety of mainly local customers.

Data on individual transactions further showed that 38.8% of sellers and 44.1% of buyers in the south-west were female, compared with 52.9% and 13.3%, respectively, in the south-east. Thus, proportions of farmer sellers and females were higher in the south-east than in the south-west. In contrast to sellers, most buyers in the south-east were male traders, while in the south-west buyers were mostly female food caterers, farmers and traders. Although there was no significant difference between male and female buyers in terms of choice of sex of seller in the south-west, female buyers in the south-east appeared to have a preference for female sellers.

Several reasons were given for selling small ruminants. Traders were in the business of making profit, but farmers engaged in small ruminant trade for a variety of reasons, including meeting household cash needs and satisfying requirements for weaning or culling animals. The most prominent reason for selling animals is to meet cash needs. This confirms that small ruminants play an important role as a source of income and savings in subsistence oriented farming systems.

Average age, weight and price data for animals traded in the south-west and south-east study sites exhibited the following features:

- Animals sold in the south-east were older, of significantly lower weight and lower price than in the south-west. This can probably be attributed to the fact that, unlike in the south-west, animals in the south-east are generally confined and tethered, and so have fewer choices in terms of feed.
- In both regions, northern animals were older, had higher weight and value per head, but fetched lower prices per kilogram than southern animals, suggesting consumer preferences for southern animals. In the south-west, sheep were dearer than goats, but in the south-east goats were dearer.
- In both regions, females were older and of higher weight and value per head, but their prices per kilogram did not differ from those of males.

ANOVA results showed that price variation over the entire period of the study was not significant although a t test showed that differences between yearly average price and average price of certain months were significant.

A demand function fitted to the data showed that significant factors in price variation were sex, origin of animal (northern or southern) and body weight. While in the south-west females and northern animals fetched significantly lower prices than males and southern animals, these factors were not significant in the south-east. Prices in the south-east were also significantly lower than in the south-west. The negative effect of the body weight variable, particularly in the south-east, was indicative of the lower prices commanded by older or heavier animals. Animals sold during festival periods in the south-east were of heavier than normal, probably due to the larger inflow of northern animals at these times.

**Implications for increased small ruminant production**

Although southern animals have maintained stable market shares, northern animals appear to be apportioning an increasing market share in the sites studied. The increased penetration of northern animals into southern rural markets can be attributed to three main factors.

First, transporting animals from the north has become faster, easier and cheaper due to improved roads
between northern and southern areas. This has allowed traders to take advantage of market opportunities in southern rural and urban markets. Such developments may have adversely affected small-scale southern farmers with low bargaining power. The fact that southern animals command higher prices indicates that southern consumers still have a preference for southern animals, but there are indications that such preferences are being increasingly eroded by strong competition from and lower prices of northern animals.

Secondly, supply from local sources, though increasing at peak demand periods, is inadequate to meet local demand. This can largely be attributed to the subsistence orientation of local production on sale which is determined more by farmers’ cash needs and/or animal condition than actual market demand.

Thirdly, although sales by small-scale southern farmers are year-round, aggregate offtake from the system is low and a good number of local animals traded in the market go back to the villages for rearing because proper exchange of breeding stock has not been established in any other way.

Overall, observed higher prices at short, mainly festival-related, peak periods may not contribute much to increased small ruminant production in southern Nigeria. Production technologies that require extra cash or even labour may not be in high demand among subsistence oriented southern farmers. Under such circumstances, production technologies that contribute to year-round increased supply, such as disease control measures that would increase flock size and provide farmers with better leverage, may make a better overall contribution to aggregate supply. Such year-round increases in production may be of particular importance to women farmers who have specific family responsibilities and use small ruminants to fulfill these. Adoption of the production technologies proposed above need not preclude commercial production which may be geared to peak festival time markets.