

# Survey of Prices of Beef, Mutton, Goat Meat and Chicken in Niger State Between 1995 and 2000.

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**Target Audience:** Livestock farmers, Economists, Butchers, Meat consumers

## Abstract

Data collected on the market prices of beef, mutton, goat meat and chicken from urban and rural markets over a period of six years (1995-2000) in three agro-ecological zones (Zones 1, 2 and 3) of Niger state were used for the study. Zone 2 which was the most cosmopolitan of the three zones recorded significantly higher ( $P < 0.05$ ) prices as well as higher annual price increases in both urban and rural markets. Differences between urban and rural market prices were also significantly different ( $P < 0.05$ ) in all the zones and for all the items. Prices increased steadily between 1995 and 1999 and sharply between 1999 and 2000 for all the items and in all the locations. Annual price increases of 19.77 to 27.23 %, 16.62 to 20.12 %, 18.44 to 24.97 % and 13.71 and 17.82 % were recorded for beef, mutton, goat meat and chicken respectively. Price increases were observed between October and March with a peak period in December/January. The lowest prices were recorded between the months of June and September. Higher prices coincided with end of year/new year festivities. Increased in salaries and wages in the year 2000 brought about a sharp increase in the prices of all the items.

**Keywords:** Beef, Mutton, Goat meat, chicken, urban market, rural market

## Description of Problem

Niger state provides a favourable environment for the production of livestock. Farmers in the state engage in the rearing of cattle, sheep, goats and poultry which are marketed in order to supplement their revenue from the cultivation of crops. However, the changes in seasonal supply and demand affect the marketing of livestock and livestock products (1, 2). An efficient marketing of livestock and livestock products is also of interest as a means of making the much needed animal protein available to the populace (3). It has been observed by (4) that several factors affect price of livestock products such as meat in Nigeria. They include problems associated with livestock production, as well as seasonal variation in demand and supply.

The objective of this work was to analyse the prices of four types of meat namely beef, mutton, goat meat (chevon) and chicken, taking into consideration the location of market, season and year. The vantage position of Niger state as a link between the northern and southern parts of Nigeria is a justifiable reason to carry out this study.

## Materials and Methods

This survey was carried out within the three agro-ecological zones of Niger State as defined by the Niger State Agricultural Development Project (NSADP). Niger state lies between longitude 5° and latitude 10°.

The primary data used for the study were obtained from the Planning Division of NSADP,

Shiroro Road, Minna, Niger State. The data which covered a period of six years (January 1995 to December 2000), were collected by NSADP enumerators from market centres located in the three agro-ecological zones. The data covered a total 16 markets with Zones 1 and 3 having 3 urban and 3 rural markets each while Zone 2 with a relatively smaller geographical size, had 2 urban and 2 rural markets (Figure 1).

At each sampling date, a standard weighing scale (Salter scale) was used to weigh out 1 kg of meat being offered for sale by the butchers. A reasonable price was then agreed upon between the enumerator and the butcher. In the case of chickens, prices were based on live weight/bird

after which the cost/kg was calculated. Price surveys were conducted on weekly basis, usually on market days. At the end of each month, data from each zone were compiled and sent to the Planning Division of the Project Headquarters in Minna. The data used in this study were based on these monthly returns. An analysis of variance and multiple range test were conducted using computer package (5) in order to compare price differences between the items (beef, mutton, goat meat and chicken), year (1995 to 2000), zone (Zones 1, 2 and 3) and the type of market (urban and rural). Graphs were plotted using Microsoft Origin computer package (6).

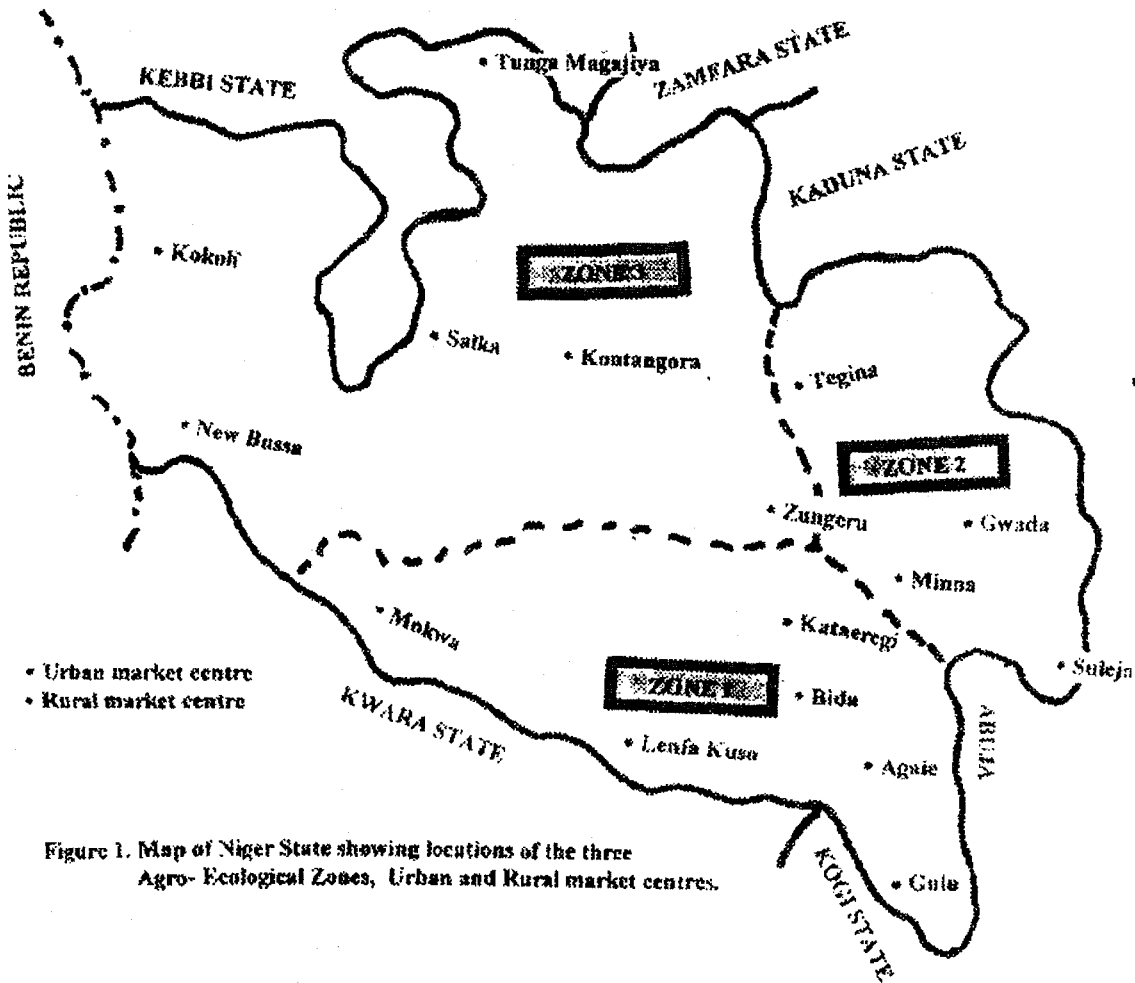


Figure 1. Map of Niger State showing locations of the three Agro- Ecological Zones, Urban and Rural market centres.

## Result

## Annual price changes of beef, mutton, goat and chicken

The items considered in this study recorded higher prices in urban markets. For beef, the urban prices were ₦163.00, ₦187.13 and ₦155.98/kg for Zones 1, 2 and 3 respectively. The corresponding values for the rural markets were ₦145.95, ₦165.66 and ₦142.04/kg. Mutton sold in the urban markets for ₦144.25, ₦159.55 and ₦140.84/kg in Zones 1, 2 and 3 respectively while in the rural markets, the corresponding values of ₦124.86, ₦134.42 and ₦120.77/kg were recorded. Goat meat sold for ₦153.11, ₦175.74 and ₦144.48/kg in urban markets located in Zones 1, 2 and 3 and in rural markets, for ₦135.88, ₦146.40 and ₦140.85/kg in Zones 1, 2 and 3 respectively.

Annual price increases were highest for beef which recorded values of 21.61 %, 27.23 % and 19.77 % in Zones 1, 2 and 3 respectively. Goat meat, recorded annual increases of 20.19 %, 24.97 % and 18.44 % in Zones 1, 2 and 3 respectively, while for

mutton, annual increases were 17.62 %, 20.12 % and 16.62 % in the respective zones. The lowest annual price increases were observed for chicken with values being 15.53 %, 17.82 % and 13.71 % in the respective zones. Annual price increases (in both urban and rural markets) were significantly higher ( $P < 0.05$ ) in Zone 2, but no significant difference ( $P > 0.05$ ) was found between Zones 1 and 3. The average of urban and rural prices of all the items were also significantly higher ( $P < 0.05$ ) in Zone 2

Marked differences in prices were observed between urban and rural markets. Thus, beef in urban markets was more expensive by ₦17.05, ₦21.47 and ₦13.94/kg in Zones 1, 2 and 3 respectively when compared with the prices in rural markets. For mutton, price differences between urban and rural markets were ₦19.39, ₦25.13 and ₦20.07/kg in Zones 1, 2 and 3 respectively. Goat meat also recorded price differences of ₦17.23, ₦29.33 and ₦7.26/kg between urban and rural markets. Similarly, the

Table 1. Average cost of beef, mutton, goat meat and chicken in urban and rural markets in the three agro-ecological zones of Niger State between 1995 and 2000.

Item	Zone	Urban Market Price	Rural Market Price	Average Price (Urban & Rural)	Price Difference (Urban-Rural)	% Annual Price Increase (Urban & Rural)
Beef	1	163.00a	145.95a	154.48a	17.05b	21.61a
	2	187.13b	165.66b	179.99b	21.47c	27.23b
	3	155.98a	142.04a	114.16a	13.94a	19.77a
Mutton	1	144.25a	124.86a	134.56a	19.39b	17.62a
	2	159.55b	134.42b	146.98b	25.13c	20.12b
	3	140.84a	120.77a	130.81a	20.07a	16.62a
Goat	1	153.11a	135.88a	144.49a	17.23b	20.19a
	2	175.74b	146.40b	161.07b	29.33c	24.97b
	3	144.48a	137.22a	140.85a	7.26a	18.44a
Chicken	1	230.45a	210.02a	220.23a	20.43b	15.53a
	2	273.18b	241.48b	257.33b	31.70c	17.82b
	3	212.71a	202.38a	207.71a	10.33a	13.71a

<sup>abc</sup> Means having different letters in the same column for each item are significantly different ( $P < 0.05$ ).

price of chicken in urban markets was higher by ₦20.43, ₦31.70 and ₦10.33/kg in Zones 1, 2 and 3 respectively compared with the price in rural markets. Price differences between urban and rural markets were all significantly higher ( $P < 0.05$ ) in Zone 2. For all items and in all the zones, prices rose steadily between 1995 and 1999 and sharply between 1999 and 2000 (Figures 2 and 3).

### Monthly variation in Price

Prices on monthly basis experienced steady increases between the months of October and March (Figure 4) and were highest in December/January for all the items. However, prices declined between June and September. Although the prices of all the items followed similar seasonal pattern, those of beef and chicken were higher than those of goat meat and mutton through out the year.

### Discussion

#### Annual prices of beef, mutton, goat and chicken

This study showed that in all the zones, the prices of beef, goat meat, chicken and mutton rose steadily between 1995 and 1999, then increased sharply between 1999 and 2000. This agreed with the finding of (7) who observed that between 1987 to 1996, annual average beef price rose steadily from ₦7.12 to ₦56.00 per kg. Also (8) reported that the price of beef in Nigeria increased from ₦2.50 in 1975 to ₦25.00 in 1992. Also, in a study conducted by (9) a 125 % increase in price of beef and chicken between 1985 and 1988. The increase was attributed to high transport cost, increased demand and low supply.

The sharp rise in prices between 1999 and 2000 was due to a general increase in the salaries and wages of most consumers. This confirmed the observations of (10) who found that the diet of people who earn only \$200/annum contained as little as 17 % of protein from animal origin. With an annual income of \$600, the proportion of the animal protein rose to 36 %. The diet of people earning \$1200/annum contained up to 55 % of protein of animal origin. The study further revealed that in affluent countries like the USA with income of about \$1800 per head, about 70 % of the total protein consumed was derived from animal sources.

#### Price variation between urban and rural markets

The study revealed that prices were higher in urban market. This agrees with the results of previous studies (11; 12). Also, in the study conducted by (13) it was observed that the price of goat was 42 % higher in urban markets than in rural markets. The result of this study showed that prices were higher in Zone 2. This may be due to the fact that two major towns, Minna (the state capital) and Suleja (close to the Federal capital city Abuja) are located in Zone 2. Both towns have larger consumers.

The lower prices observed in the rural markets might be attributed to the availability of cheaper sources of animal protein such as fish, and game animals (*bush meat*) which are abundant in the rural areas of the state. The impact of such sources on the price of livestock products may vary from one zone to the another and this may likely be responsible for price variations between the various agro-ecological zones.

Goat meat appeared to be more expensive than mutton. This is not surprising since there is a wide preference for goat meat (14). Abattoirs records (MNR, 2000) in Niger state showed that more goats were being slaughtered than cattle and sheep. Sheep are not commonly slaughtered for sale, except those processed into "*suya*" meat which are hawked about in urban centres and villages.

The price of chicken remained relatively high in all the zones throughout the six-year period. It was reported by (15) that most rural families keep chicken and one would expect a relatively lower price for this item. However, (17) remarked that many rural people keep chickens as a source of income. In a study in Zambia he found that the high cost of chicken, put the commodity beyond the reach of the majority of people in both rural and urban areas. Th results suggested that chicken can only be purchased or consumed by richer segment of the populace or on special occasions such as during festivals, since there are cheaper alternatives such as goat meat and mutton.

#### Monthly variation in price

Average prices per kilogramme of all items peaked in the months of January and December. This was the period of high demand, when most people

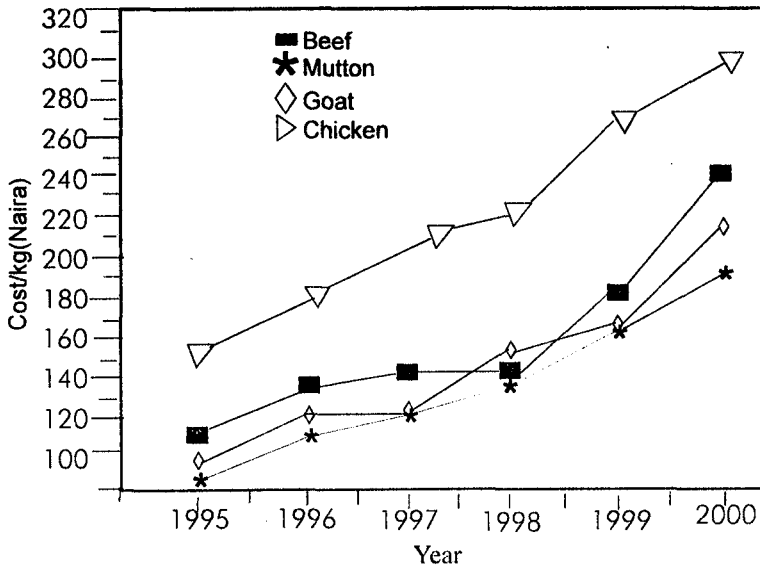


Figure 2. Cost of beef, mutton, goat meat and chicken between 1995 and 2000. Values represent average cost/kg for urban and rural markets in all the zones.

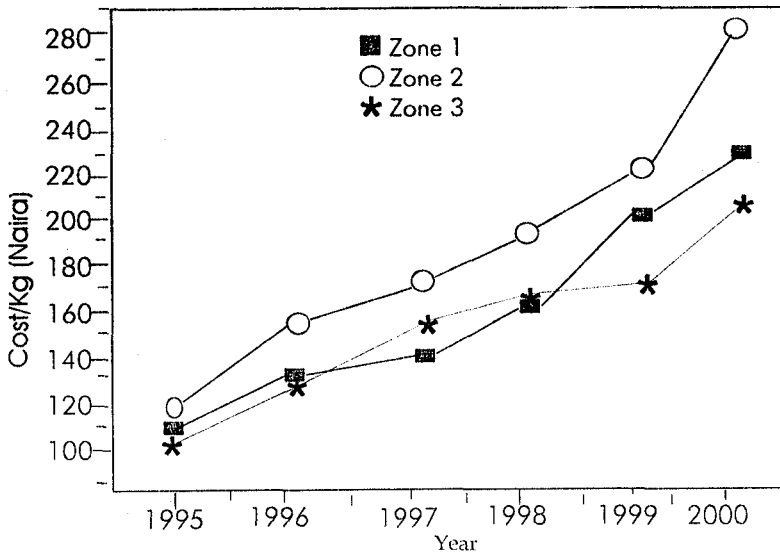


Figure 3. Cost of four types of metal in three agro-ecological zones of Niger State between 1995 and 2000. Values represent average cost/Kg of all the items (beef, mutton goat meat and chicken) in each zone

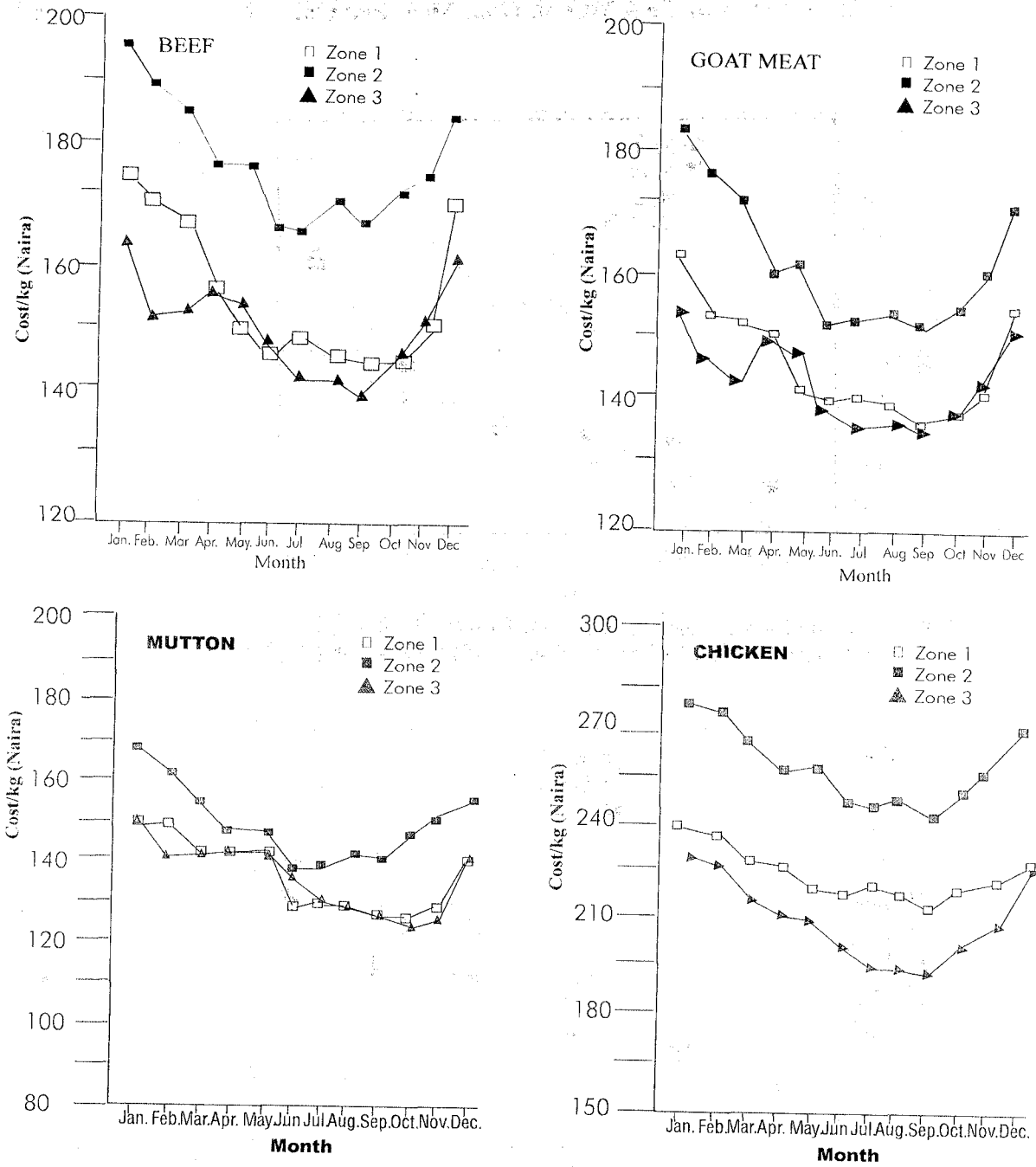


Figure 4. Average monthly cost of beef, mutton, goat meat and chicken in the three ecological zones of Niger State between 1995 and 2000. Values represent average cost/kg for urban and rural markets in each zone.

have to buy enough meat for Christmas and New Year celebrations. The celebration of Idel-Fitri and Idel-Kabir (Muslim *Sallah* festivals), Christmas and Easter periods are very important factors affecting prices, and have significant impact on the up ward pressures on the prices of small ruminants and chicken. Sharp price increases during religious and end of year celebrations were reported by (9). Also, (18) revealed that the highest sales volume, with regard to cattle was in December, while the least was in August. It is likely that enhanced purchasing power of peasant farmers shortly after crop harvest may also be responsible for the relatively higher prices between the months of December and January.

### Conclusion

The results obtained from the study has shown annual increases in the prices of beef, mutton, goat meat and chicken between 1995 and 2000. Sharp increases were observed between 1999 and 2000 due to increased earnings in salaries and wages among the working class consumers. Within any given year, prices were higher during periods of end of year or new year celebrations. Differences were observed between zones such that prices tended to be higher in zones with towns that are more cosmopolitan in nature. For example, Zone II which harbors towns like Minna (the state capital) and Suleja a satellite town to Abuja, the Federal Capital, recorded higher prices throughout the period of the study. Also, prices tended to be higher in urban markets than in the rural ones. This may be due to the poor purchasing power of the rural populace and availability of alternative sources of animal protein such as fish and game animals. Other factors include the cost of transportation, the large number of middle men that characterize the marketing of livestock in urban markets. Price differences between the urban and rural markets could be reduced through the provision of good road network in rural areas which will allow for easy transportation of livestock to urban centres. Finally, adequate establishment of marketing information system will greatly assist in the development of a viable livestock enterprise, which will permit farmers to profitably market their livestock.

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