

# Meat consumption in Andhra Pradesh

Meat consumption in Andhra Pradesh  
an analysis of the meat preferences of rural people in India

The present study was conducted in Prakasam district of Andhra Pradesh, India to find out the meat preferences of rural people.(from Livestock Research for Rural Development)

## Abstract

## Introduction

Animal Husbandry is playing a pivotal role in the Indian economy by contributing by about 5.5% of Indian GDP (Gross Domestic Product) (Basic Animal Husbandry Statistics 2002). The contribution to GDP mainly depends on the production and productivity of the animal and consequent utilization of the products by the consumers. Meat and its products are the part of staple diet of many Indian families. The meat consumption behavior is the deciding factor for the development of livestock sector in general and a specific enterprise in particular. In general, consumer's behavior indicates the process, activities that people engage in when searching for, selecting, purchasing, using, evaluating and disposing of products and services, so as to satisfy their needs and decisions. The consumer behavior theory postulates that consumers look at completeness, monotonicity, reflexivity and transitivity, continuity and convexity, which influences their behavior. The study of consumer helps firms and organizations improve their marketing strategies by understanding the issues such as a) how consumers think, feel, reason and select between different alternatives and b) how consumer is influenced by his environment. Various external factors such as culture, sub culture, social class, reference groups, family decisions and certain situational determinants also influence the consumer's purchase decisions. The meat consumption behavior falls with in these lines and varies with the societal set up in which the consumers are operating. The culture, traditions, customs, taboos are influencing the consumption of meat, especially in Indian rural societies. Very limited information is available on the meat consumption patterns of Indian rural families. The specific meat consumption pattern will be of much use in planning the location specific and species based animal farming. With this background, the present study was formulated with the objective to identify the meat consumption patterns of rural population in a typical Indian society.

## Materials and Methods

The present study was carried out in Prakasam district of Andhra Pradesh through an ex post facto research design. It is suitable design which envisages that the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable (Kerlinger 1973). For the present study, 50 rural consumers were selected randomly spread over 21 villages of 18 mandals/ blocks. The data were collected through a pre tested interview schedule during March 2005. It was subjected to appropriate statistical analysis and the results are presented accordingly.

# Results and Discussion

## General profile of respondents

The statistical analyses revealed that majority of the respondents were middle aged (45.1 years), had the family size of 3.63 with nuclear families and land size of 6.15 acres. Most of the respondents had education up to high school and intermediate (50.0%). Among the total respondents, 62.0% were agricultural farmers, 30.0% were employees and remaining respondents had animal husbandry as their major occupation. The average annual income of respondents from different sources was found to be \$1055, out of which agriculture sector's share was \$320, employment \$684 and animal husbandry sector \$52 per year.

## Meat consumption patterns

Even though 50 respondents were selected for the present study, only 40 respondents were considered in the present section as the remaining 10 respondents were found to be vegetarians. Hence, the data presented in the current section represents the expressions of 40 respondents only. The meat consumption patterns of rural people of Prakasam district of Andhra Pradesh, India (Table 1) revealed that the most preferred meat was chicken (50.0%), followed by mutton (25.0%) and fish (25.0%).

Occasionally	9	22.5
Specific occasions	6	15.00
<b>Affordability</b>		
Yes	24	60.00
No	16	40.00
<b>Place of purchase</b>		
Road side shop	5	12.50
Well maintained shop	13	32.50
Vendors	3	7.50
Home (dressed)	19	47.50
<b>Regular consumption</b>		
Good for health	16	40.00
Not good for health	20	50.00
Can't say	4	10.00

Koizumi et al (2001) reported similar results. The reasons attributed for their preference were taste (67.5%), habituated (10.0%), affordable (7.5%) and fond of chicken (15.0%). So the individuals taste is the key factor for their preference of chicken/ mutton/ fish (Harnack et al 1999). In the study area, no respondent had preferred beef or pork. This is an indicator of how the religious sanctions influence the meat consumption

behavior. It's a well-established fact that religious sanctions restrict Hindus (a dominant religion in India) to consume beef and Muslims to consume pork. So these factors ought to be considered by the livestock planners while advocating any species for meat purpose in a given area. In Brazil, it was reported by Castro et al (2002) that around 95% consume pork once in a week and in Germany it was pork consumed most often, followed by chicken (Becker et al 1997). The average cost of chicken in the study area was found to be \$1.5 per kg as against mutton cost of \$3. As the chicken has much market potential, the more emphasis is to be given on chicken production, as it is the most preferred meat. The rural consumers also preferred mutton and fish to some extent. Income, age, household size and ethnic factors did affect the purchase of meat according to Goodwin and Koudele (1990).

Majority of rural people were consuming chicken twice in a fortnight (45.0%) and twice in a week/ once in a fortnight (27.5%). A similar trend was observed in Germany also (Becker et al 1997). So it is the individual's choice, liking, occurrence of specific occasions and the affordability that decides the frequency of chicken consumption. The mutton was consumed only once in a month or on specific occasions by majority of the respondents (52.5%) which was due to the cost (double to that of chicken) and taste of mutton. The fish was also consumed once in a month or occasionally by many rural consumers (27.5%), followed by once in fortnight (17.5%). Even though fish has no religious sanctions for consumptions, but the frequency of consumption was

less due to irregular availability in the market and cumbersome cleaning process. Only 7.5% of respondents expressed their desire to consume beef occasionally and no one for pork. The low preference for beef / pork was due to religious sentiments (70.0%), tradition (22.5%) and taboos (7.5%). On the contrary, Castro et al (2002) reported that majority were pork consumers in Brazil.

The rural meat consumers' preference to have meat in the food on all days was also ascertained and found that only 27.5% respondents preferred meat on all days. The remaining 72.5% respondents' were not preferring meat daily due to the traditions (42.5%) and sentiments (25.0%) Very few people (5.0%) are not interested to consume meat on all days due to their personal reasons. Some of the consumers (27.5%) did not attribute any specific reason.

It was found that the majority were consuming more meat during winter followed by rainy season. Few people (15.0%) do not prefer meat in summer. More consumption of meat during winter and rainy season was due to cool weather so that the spicy nature of meat preparations may not cause any digestive disturbances. The season also played an important role in the consumption of meat. So the livestock farmers plan accordingly to market their poultry/ animals in winter and rainy seasons. This factor significantly forecast the farmers to start fresh batch of poultry accordingly so that they can have good market during winter and rainy seasons.

As the Indian meat consumers are controlled by the traditions and customs, it was thought appropriate to know the rural consumers' preference for meat during Sravan, an auspicious month for Hindus which occurs during July- August - September. More than half of the respondents (57.5%) did not prefer to take meat during that particular month (Sravan). This factor significantly influences the production aspects. The commercial poultry farmers do consider this factor while planning for starting a fresh batch of broilers. Even the consumption of eggs also will also be lowered during this period. This is a slack period for the meat industry in and around the study area.

It was found that chicken, mutton or fish were available only on a specific day of the week as expressed by 47.5% of respondents. Some respondents expressed that the meat was available occasionally (22.5%) and only on specific occasions (15.0%) and daily (15.0%). The quantity consumed in a month is based on the availability. On an average 1.07 kg of meat is being consumed by a family every month in the study area, which is very low when compared to recommended meat consumption of 50g/day/individual. Further the affordability to purchase at the current prices by rural consumers was less (60.0%). Each family is spending about \$3 towards meat per month. Gandhi et al (1995) reported that milk is far the most important item of consumer expenditure followed by eggs, meat and fish. Livestock farmers and extension agencies should find ways to reduce the production cost and so the chicken is available at cheaper price. The rural consumers were purchasing chicken / mutton from well maintained shop only (32.5%), followed by road side shop (12.5%). But majority of the chicken consumers (47.5%) were purchasing the live poultry birds and dress them at their homes. In Germany, chicken is purchased from super markets, while beef and pork from butcher shop ((Becker et al 1997). It was ascertained from the rural consumers that regular consumption of meat was not good for health (50.0%) and good number of respondents (40.0%) gave the positive response. In case of German consumers, fat/ cholesterol don't play a big part for all the meats - beef, pork and chicken ((Becker et al 1997). But in China, the urban and richer rural respondents tend to consume more beef, mutton, eggs and milk which showed positive correlation to heart diseases, cardio vascular disease and cancer ( Chen Chun Ming 1995). Nowadays the health consciousness is on the rise due to various mass media channels and so rural consumers gave this type of response. The consumers' preference should be the basis for long term planning of meat production (Morrison et al 2003).

## Meat quality characters as preferred by

# consumers

The meat quality characteristics as preferred by rural consumers were also ascertained (Table 2).

Items	Frequency (n=28)	Percentage
<b>Freshness</b>		
Not compromising on freshness	27	92.5%
<b>Adulteration</b>		
Adulteration	9	32%
Taste	8	28.6%
Naked eye	22	78.6%
Color	24	85.7%
Others	7	25%
<b>Meat hygiene</b>		
Essential	17	60.7%
Not essential	11	39.3%
Preferential meat	14	50%
Not preferential	14	50%
<b>Meat safety</b>		
Can't predict the quality of meat	9	32.1%
Can predict the quality of meat	19	67.9%
Can't judge the quality	6	21.4%
Can judge the quality	22	78.6%
<b>Other items</b>		
Price	7	25%
Meat	8	28.6%
Hygiene	13	46.4%
Others	14	50%

Most of the respondents (92.5%) were not compromising on the freshness of the meat. (Tzimitra Kalogianni 1997; Becker et al 1997). The respondents had strong desire for fresh meat and hence they are able to detect the adulteration of meat by taste (60.0%) and naked eye (30.0%). This is a favorable trend exhibited by the consumers. The rural consumers were well aware of the effects of consumption of adulterated meat. But the German consumers did not regard themselves as being capable to predict the quality of meat (beef) just by looking it at (Becker et al 1997). The meat hygiene was also essential (42.5%) and required (40.0%) as expressed by the respondents. So the rural consumers were well aware of the hygiene and its importance. This may be due to the awareness created by mass media and other channels.

The rural consumers (65.0%) were not in favor of processed food as it will not be tasty (20.0%) and hence they are habituated to eat fresh meat (70.0%). Only a few consumers (10.0%) expressed their inability to change their habits. On the contrary, Chinese shifted their dietary pattern because of economic change, leading to spend more money on processed food (Chen Chun Ming 1995). Most of the consumers of Korea purchased the processed meat products such as ham and sausage products once in a month (Cho et al 2003). Further it was suggested to implement quality-grading system for processed meat products to increase its market. Awareness on the advantages of processed meat has to be created by the farmers associations, extension and marketing agencies.

The Indian style of cooking meat is different from that of other countries like Brazil and USA. Generally Indian people prefer more spices, chilies in the preparations like in Pakistan, Sri Lanka and Bangladesh. That's why rural consumers preferred dishes that were spicy (37.5%), followed by normal preparations (35.0%), fried (17.5%) and roast (10.0%) type of dish in their food.

## Differences in the perceptions within the age groups

The respondents were categorized into two groups based on their age i.e. younger than the middle age and older than middle age to find the differences in the perceptions within the two age groups with reference to meat consumption and quality characters (Table 3).

Items	Group 1 (n=14)	Group 2 (n=14)
<b>Meat consumption</b>		
Meat consumption	10 (71.4%)	9 (64.3%)
Meat consumption frequency	5 (35.7%)	3 (21.4%)
<b>Meat preference</b>		
Meat preference	10 (71.4%)	10 (71.4%)
Meat preference	10 (71.4%)	10 (71.4%)
Meat preference	10 (71.4%)	10 (71.4%)
<b>Meat quality</b>		
Meat quality	10 (71.4%)	10 (71.4%)
Meat quality	10 (71.4%)	10 (71.4%)
Meat quality	10 (71.4%)	10 (71.4%)
Meat quality	10 (71.4%)	10 (71.4%)
<b>Meat safety</b>		
Meat safety	10 (71.4%)	10 (71.4%)
Meat safety	10 (71.4%)	10 (71.4%)
Meat safety	10 (71.4%)	10 (71.4%)
Meat safety	10 (71.4%)	10 (71.4%)
<b>Meat hygiene</b>		
Meat hygiene	10 (71.4%)	10 (71.4%)
Meat hygiene	10 (71.4%)	10 (71.4%)
Meat hygiene	10 (71.4%)	10 (71.4%)
Meat hygiene	10 (71.4%)	10 (71.4%)

## Meat consumption

In Group 1 (younger than middle age), the items such as reasons for their meat preference, fish and beef consumption frequency, reasons for non consumption of beef/pork and meat consumption during different seasons were found to be significant items. This indicated that the consumers who are below middle age had specific meat consumption behavior with reference to certain items.

The consumers of above middle age exhibited variation in the items such as: reasons for their meat preference, mutton and beef consumption frequency, reasons for non consumption of beef / pork, meat consumption on all days and reasons for non consumption on everyday and meat

consumption during different seasons of the year.

When both the groups are compared, the fish and mutton consumption varied. Young people preferred to have fish at different intervals i.e. once or twice in a week, fortnight, month, while the older than middle age respondents wanted mutton at different intervals. The two variables, i.e. days of consumption of meat and reasons for non consumption everyday were significantly varying among the Group 2 respondents. It indicated that respondents favored almost equally between having and not having meat on all days.

## Meat quality

As far as meat quality characters are concerned, freshness of meat, not good taste of processed meat and habituated to eat fresh meat and fried meat dishes were significant in both the groups. Multiple reasons such as not good taste and habituated to eat fresh meat, were expressed by the two groups for not relishing of processed meat. These reasons are to be considered while marketing the processed meat.

In case of Group 1, the detection of adulteration by other means such as smell and touch varied as most of the people detect the adulteration by naked eye and by taste. The other variable 'meat hygiene' was also recorded with varied responses such as essential and required. So the consumers are giving utmost importance to meat hygiene with a change in the magnitude of responses.

In case of Group 2, detection of adulteration by taste was found to be significant which indicates that the respondents above middle age were relying more on naked eye and other means of detection of meat adulteration.

The variations in the different items of meat consumption and quality with in the age groups should be considered in formulating the marketing strategies.

## Conclusions

The livestock farmers, market agencies and extension organizations should take into account the various determinants such as preferences, choices, sentiments that are influencing the meat consumption behavior of rural people in popularizing the specific species farming suited to that locality.

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