

WHEAT CONSUMPTION PATTERN IN MUZAFFARABAD, AZAD JAMMU AND KASHMIR (AJK)

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ABSTRACT

To estimate wheat consumption pattern in Muzaffarabad, Azad Jammu and Kashmir (AJK). A farm level survey was conducted in the year 2006-07. Two hundred households (100 from rural and 100 from urban areas) were randomly selected. The data revealed that average family size was nearly 8 persons in research area. Literacy rate was found to be 96 and 64 percent in urban and rural areas, respectively. It was also found that non-producer of wheat consumed less wheat in rural areas (81.43) as well as in urban areas (88.77) as compared to wheat producer (109.40 and 94.34 kg). The data depicted that wheat producers consume about 16.77 kg more wheat per capita per annum than wheat non-producer consumer. The data showed that rural consumer consumed 5 kg rice per capita per annum which was lower than urban rice consumer and wheat consumption increased as income increases. An income group of Rs.10,000 and above consumed more quantity of wheat (100.65 kg) as compared to income group of Rs.5,000 (87.22 kg) and regression analysis also showed the same results. A negative relationship was observed between per capita wheat consumption and consumption of other food grains. The farmers should consider substituting wheat with high value crop.

KEYWORDS: Wheat; household consumption; Azad Jammu and Kashmir; Pakistan.

INTRODUCTION

Wheat is the staple diet of people of Pakistan. It contributes 12 percent to value added in agriculture and 2.9 percent to GDP. It occupies 75 percent of total rabi cropped area of the country (4). The performance of wheat crop affects the overall growth rate of agriculture sector and import bill of the country. Pakistan experienced a record wheat production, during 1999-2000.

Pakistan experienced a negative trend since its existence upto Green Revolution period (1965-1976). During this period, country witnessed increasing trend in wheat yield. Pakistan has been a net importer of wheat

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since past several decades.

Pakistan imported 5.7 million tons wheat during 80s and 2.07 million tons during 90s. The highest quantity of wheat (4.1 million tons) was imported during 1998, which decreased (1.6 million tons) in 2000 (2). This decrease in import was primarily due to record wheat production. A difference of opinions persisted among experts on extent of contribution of various factors that enhanced wheat production. Crop management practices and decisions involved in wheat production may be the main factor contributed to increased production. The data revealed that wheat yield in irrigated Punjab (2645 kg/ha) was some how equal to the world average. Punjab is leading province regarding wheat yield, followed by Sindh, Baluchistan and NWFP. In Azad Jammu and Kashmir with an average yield of 1226 kg per hectare is far behind the average yield of Pakistan. However it is worth mentioning that wheat area of AJK is rainfed and average yield of AJK is higher than average yield of non-irrigated areas of Pakistan.

In AJK wheat is grown at an area of about 92 thousand hectares with an annual production of about 113 thousand tons. The local wheat production cannot fulfill domestic needs and nearly 350 thousand tons of wheat were brought to AJK from Pakistan during the year 2001-02 (1). With a total population of about 3.33 million, Muzaffarabad district constitute about 25 percent of population of AJK. An estimated per capita wheat consumption of 150 kg per annum and population growth rate of 2.5 percent per annum, district Muzaffarabad were requires 1.5 million tons of wheat by the year 2010.

This study is mainly designed to estimate consumption pattern of wheat in AJK and to analyze different factors affecting its consumption and to suggest policy recommendations.

MATERIALS AND METHODS

This study was conducted at Technology Transfer Institute, Muzaffarabad, Azad Jammu and Kashmir during 2006-07. Two hundred households (100, each from rural and urban areas) were randomly selected. No prior stratification were taken on the sample household, however, due to various constraints, approachable villages were selected.

The data were collected through a comprehensive interview schedule. Single interview schedule was used to collect data on all aspects, regarding socioeconomic characteristics of households and other relevant information.

Data analysis

For simple analysis, mainly cross tabulation and frequency distribution were executed through SPSS. To capture effect of various factors affecting wheat consumption, following econometrics model was used.

$$PWC = \beta_0 + \beta_1PI + \beta_2L + \beta_3OEX + \beta_4PCM + \beta_5PCR + u \dots \dots (1)$$

Where,

PWC	=	Per capita wheat consumption in kg,
PI	=	Per capita income of respondent,
L	=	Locality of the resonant,
OEX	=	Other household expenditure per capita,
PCM	=	Per capita maize consumption in kg
and PCR	=	Per capita rice consumption in kg,
while β_s	=	Coefficient of these variables to be estimated.

RESULTS AND DISCUSSION

Family size and literacy rate

The average family size in research area was nearly 8 persons per household. The male female ratio in research area was 1:1.02. Studies conducted in different parts of world reported that literacy status of farmers was an important variable, influencing farmers' receptiveness to innovation and good resource allocation (9,12,13). The level of human capital formation is generally measured through mean number of schooling years (8,14). The study area showed very encouraging literacy rate; i.e., 96 percent and 64 percent in urban and rural areas, respectively. AJK has high literacy rate as compared to Pakistan.

Wheat consumption

The data (Table 1) on wheat consumption per capita per annum for sampled respondents showed very interesting results. Non-producers of wheat consume less wheat in rural areas as well as in urban areas as compared to wheat producers. Furthermore non-producers rural wheat consumer consume less amount as compared to urban one but consume more than its urban counterpart if he is wheat producer in rural areas. These figures also depict that wheat producers consume about 16.77 kg more wheat per capita per annum than wheat non-producer consumer. The per capita wheat

consumption for sampled respondents was lower as compared to Pakistan (108 kg/capita/annum) (6).

Table 1. Per capita wheat consumption for wheat producers and non-producers

Status	Status	Wheat consumption (kg/annum)
Non producers	Rural	81.43
	Urban	88.77
Average		85.10
Producers	Rural	109.40
	Urban	94.34
Average		101.87

Wheat and rice consumption

The results showed that rural consumer consume 3.87 kg more wheat than urban consumer, However, they consumed 5.0 kg less rice than urban one. The results further depicted that sample respondents consumed about 142 kg per annum of cereal diet including 64 percent wheat and 34 percent of rice. In Pakistan, wheat shared 89 percent with rice consumption, while this figure stood at 74 percent in 1980 (11). Rice is typically used for human consumption, and in wheat-eating countries wheat performs same role. In view of international comparison of wheat use, individual countries may demonstrate significantly different patterns and such differences cannot be explained simply by variation in purchasing power (6)

Table 2. Average wheat consumption by the sampled households.

Area	Income classes			Average
	10001-Above	Rs.5001- 10000	Rs. 1-5000	
Rural	102.70	94.40	89.20	95.43
Urban	98.61	90.84	85.23	91.56
Average	100.65	92.62	87.22	93.49

Per capita wheat consumption for different income groups

The results (Table 3) revealed that more wheat was consumed in rural areas as compared to urban areas. The wheat consumption increased as income increased. An income group of Rs.10,000 and above consumed more quantity of wheat (100.65 kg) as compared to consumer belong to an income group of Rs.5000 (87.22 kg).

Factors affecting wheat consumption

To determine relative importance of various factors affecting per capita wheat consumption, the econometric model was estimated as under.

$$\begin{array}{rcccccc}
 \text{PWC} = & 92.85 & + & 2.66\text{PI} & - & 11.223\text{L} & - & 2.10\text{OEX} & - & 9.69\text{PCM} & - & 0.3\text{PCR} & \dots\dots & (2) \\
 & (7.26) & & (2.64) & & (-1.36) & & (-2.07) & & (-0.61) & & (-1.95) & & \\
 & R^2 = 0.31 & & & & \text{D.W} = 1.83 & & & & & & \text{F-stat.} = 5.10 & &
 \end{array}$$

The regression analysis showed that as per capita income increases wheat consumption also increases and vice versa. The elasticity of demand for wheat and wheat flour was usually steeper. Therefore, relationship between consumption of wheat and income by households was not normally expected to be strong (7). However, it has been argued that, with increasing income per head, demand for high-protein food rises, and that the derived demand for grains used as feed also goes up (10). Other variables showed negative relationship as per prior expectations. As expenditures on other food items increases, it reduces wheat consumption and rise in rice consumption also decreases wheat consumption. Opdam and Corneleisse (11) found that regression analysis does not reveal a significant relationship between wheat consumption and income presumably due to influence of wheat substitutes on levels of wheat consumption. Cornelisse and Naqvi (7) estimated that wheat consumption per head was consistently higher in rural areas than in urban areas.

CONCLUSIONS AND RECOMMENDATIONS

The estimated annual wheat production in AJK was 100 thousands tons, while 500 thousand tons are required for population of 3.35 millions. This showed that domestic wheat production meet only 20 percent of total demand. Previous year more than Rs.125 million was spent on wheat import. Due to land fragmentation, diversion from traditional crops to high value crops, more demand for fodder crops, etc. would definitely put forth more pressure. In view of this situation, it is highly recommended that wheat cultivation should be discouraged especially in northern AJK (district Muzaffarabad, Bagh, Rawalakot), and other high value crops like vegetables, cut flowers, and fruit orchards should be promoted. Due to small land holdings in northern AJK, wheat cultivation is not feasible in respect of returns to the farmers, rather they should spare some land to fodder crops in rabi season, as area possesses more potential for livestock rearing too. The significant effect of rice consumption revealed high consumption of rice in research area. More area under rice and maize in kharif season should be brought in northern AJK.

Southern AJK (Bhimber, Kotli and Mirpur districts) has potential for wheat cultivation that produces more than 90 percent of total wheat production. Also

it resembles with Pothwar area of Punjab, and those wheat varieties with high yield potential also perform well in southern AJK. All these factors suggest the following to narrow down the gap between demand and supply of wheat in AJK.

- Launching of programmes for supply of irrigation water
- Put more area under wheat cultivation
- Availability of quality inputs at door steps of farmers in Mirpur, Kotli and Bhimber districts.

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