STATUS OF FOOD INSECURITY AT HOUSEHOLD LEVEL IN RURAL INDIA: A CASE STUDY OF UTTAR PRADESH

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Abstract:

Food insecurity exists when people are undernourished as a result of the physical unavailability of food, their lack of social or economic access to adequate food, and inadequate food utilization. It may be happened at, individual, household, and regional levels Present study was conducted in rural masses of Shahjahanpur district to ascertain the situation of calorie intake and to identify number of food insecure people at household level, and to analyze the factors responsible for food insecurity at household level. The data were collected through field surveys of 480 households from four villages. Food insecure households account 6.67 per cent and 25 per cent households have access of food less than 1890 and 2400 calories per person a day, 10 per cent of households have the access to safe drinking, and more than 26 per cent households were identified without proper toilets. In spite of having BPL and APL cards, above 20 per cent card holders do not get any food commodity from PDS. Majority of households have the monthly income of less than Rs. 3000. At least 32 per cent households were without holding, and more than 22 per cent

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households live without keeping livestock. Majority of households belong to backward and scheduled castes and landless or marginal category of farmers and have low income with poor purchasing that leads to improper accessibility, stability and absorption of food.

Key words: Calorie intake, drinking water, households, landless and marginal farmers

Introduction

The food insecurity is a gigantic problem in front of the world population. In spite of the reaching horizon of economic development, people are struggling for the survival of their daily life (Ali, 2009) as at least 25,000 die people every day due lack of proper diets. Nearly 852 million people in the world are victims of vicious cycle of maturation and chronic hunger. It was a period of last 30 years when 70 per cent enhance was in the world population, world agriculture produced 17 per cent more calories per person today. (FAO, 2002, 2006). At the global level 33 countries have been recognized most vulnerable where the undernourishment prevalence rate is over 35 per cent. Over 60 per cent of the world's undernourished people live in Asia, and a quarter in Africa. The South Asian region is home to more chronically food insecure people than any other region in the world. Poverty is the main cause of food insecurity and hunger. Poor people in the world do not have sufficient land to grow, or to purchase enough food (FAO, 2006, Roa, 2005).

India ranks 94th in the Global Hunger Index of 119 countries and there is paradoxical situation in endemic mass-hunger coexisting with the mounting foodgrain stocks. The stocks available with the Food Corporation of India (FCI) stand at an all time high of 62 million tonnes against an annual requirement of around 20 million tonnes for ensuring food security. Still, about 200 million people are underfed and 50 million on the brink of starvation, resulting in starvation deaths. The paradox lies in the inherent flaws in the existing policy and implementation bottlenecks (Goyal, 2002).

The proportion the rural population consuming less than 2,400 calories per day has fallen in many states where poor are especially more vulnerable because they expanses their income mainly for foods. Most states have witnessed a declining poverty ratio but increased calorie deprivation. Swaminathan (2000) argues that on average 44 per cent of households are deficient

in calorie intake while malnutrition among women and children is higher. Bhandari and Dubey (2001) arrived at a similar conclusion and argued that the poverty line be recalculated on the basis of calorie requirements. Rising food prices may have caused poorer households to adopt less nutritious diets (Chakraborty, 2005). According to World Food Programme that rise of prices 87 per cent for foodgrains, 58 per cent for diary products, and 46 per cent for rice created a crisis situation which threatens to plunge more than 100 million people on every continent into hunger is called *silent tsunami* (WFP, 2008). A number of countries have been facing riots for food. Even farmers are the producers of foodgrains but are selling their wives into flesh trade to survive a few more days of living with that two-meal a day life (CNN-IBN, 2009).

Hunger, and the malnourishment that accompanies it prevents poor people from escaping poverty because it diminishes their ability to learn, work, and care for themselves and their family members. Food insecurity exists when people are undernourished as a result of the physical unavailability of food, their lack of social or economic access to adequate food, and inadequate food utilization. It may be happened at, individual, household, and regional levels (Masud, 2009, MSSRF, 2003, Roa and Deshpande, 2002; Swaminathan, 1988). However According to FAO food insecurity exists when all people, at all times, do not have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and nutritious and preferences for an active and healthy life (FAO, 1996). In other words food insecurity has limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. Hunger is potential consequences of food security and, is defined as an uneasy or painful sensation caused by lack of food (Drezee and Sen, 2008).

The food insecurity is may occurs of two types, transitory and chronic. The transitory food insecurity may occur due to natural clematises and anthropogenic factors such as flood, drought, earthquake, war, riots, erosion of income sources, price rise and so on. The chronic (hidden) food insecurity refers to a situation in which people consistently consume diets inadequate in calories generally by women, children (particularly scheduled tribes, and scheduled castes) in rural masses (MSSRF, 2003), and referred to Chronic Energy Deficiency (CED). If an adult man takes caloric intake less than 1890 calories in a day for longtime, he may be a victim of chronic food insecurity (Chakravarity and Dand, 2006). Food insecurity is responsible for poor health. Ayres and McCalla (1996) have concluded in their study, that nearly 75 per cent of poor and undernourished people live in rural areas where food itself is produced.

Objectives

Keeping in view the importance of food insecurity as a problem, the study was conducted, which has following objectives:

i) To ascertain the situation of calorie intake and to identify number of food insecure people at household level, and

ii) To analyze the factors responsible for food insecurity at household level.

Data and Methodology

The study is based on the primary source of data which were collected through field surveys during the period of 2006-07. Eight villages from the district of Shahjahanpur were selected at least two from each tahsil, a subdivision of the district. Considering on stratified random sampling basis a number 480 households were approached, 60 households from each village were selected with help of a direct questionnaire-respondent method.

To be food secure, four dimensions are needed as food availability, food accessibility, food stability and food utilization/absorption. Food availability refers to supply of food that is fulfilled with production/market/PDS, accessibility is related to income and purchasing power, and utilization (absorption) requires good health and sanitation facilities. These dimensions are affected with size of landholdings, PDS, income, drinking water, housing and sanitation conditions and castes. Therefore, the samples of households were stratified based on castes, size of landholdings, income, drinking water, housing and sanitation conditions.

The Study Area

The Shahjahanpur district is situated in a tract which lies between the Ganga and foothills of the Himalayas and forms a part of Uttar Pradesh. The district has divided into 5 natural divisions, of the order of the *tarai* forest belt, the Gomti basin, the central *bangar* lands, the Ramganga *khaddar* lands. It covers an area of 4575 sq km with a total population of 2.54 million. For administrative purposes it is divided into 4 *tahsils*, 14 development blocks, 11 urban centres, and 2,080 villages. There are 1378 PDS shops and per capita availability of land amounts

to 0.18 ha with average yield of crops 27.65 qnts/ha.

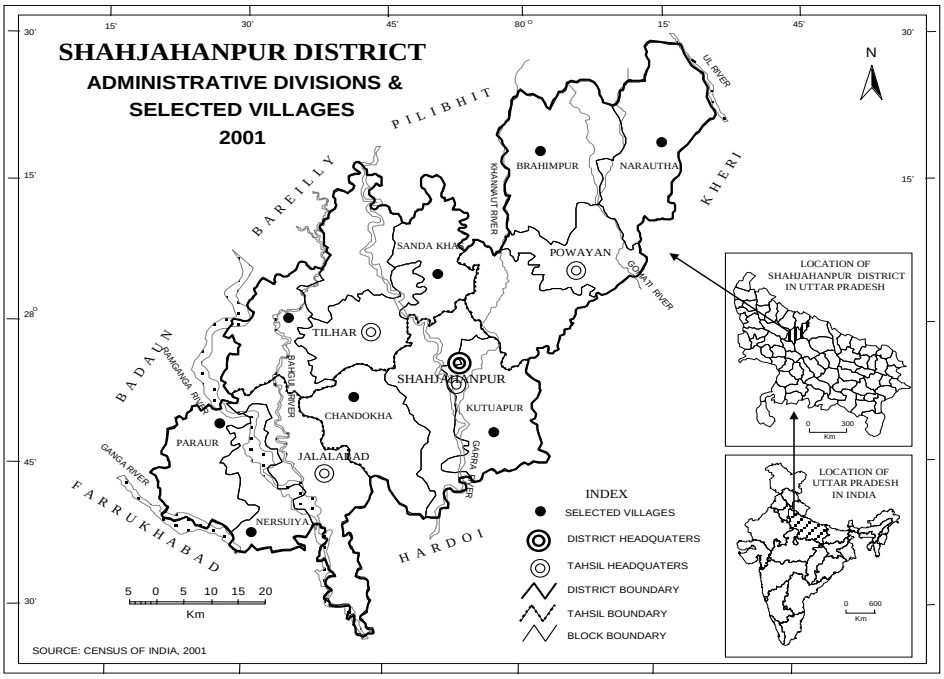

Fig.1

(i) Caloric Intake

Deficiency in calorie carbohydrate, proteins, fat, iron, and calcium affects growth and development of body and mental. If the lowest level of consumption (less than 1890 Kcal) exists in any individual, family, and household, it creates hunger and starvation that have adverse effects on human health and potential to work of people and cripple children's learning capacity and growth as normal adults. It traps individuals in a vicious cycle of poor health that passes generation to generation next. The damage caused by chronic undernourishment begins at early age and follows people throughout life. (WHO, 2002, Ahmad, 2007). In Uttar Pradesh 8 per cent people consume less than 1890 Kcal while 42 per cent are below poverty line (MSSRF, 2003). Keeping the importance of caloric intake, the surveys of selected 240 households have conducted to know the level of nutrition and consumption of food items cereals, vegetables, pulses, milks, meat, fish, and eggs etc. They are converted in the calorie on the basis table of ICMR (Indian Council of Medical Research). To identify huger, insecure and secure condition of households, total population of household is divided by the total consumed calories and three break ups are made.

Fig.2 shows the condition of food insecurity in selected villages about 25 per cent of

households were food insecure as the people do not get proper diet which is far below to 2400 Kcal. An average of 6.67 per cent households by the category nutritional intake amounts to less than 1890 Kcal/day. Due to low income and non-availability work, unemployment and limited sources of income are the main causes of food insecurity in spite of availability and accessibility to foodgrains. Villages located in less fertile soil tract (Pasricha and Singh, 2005) and in interior locations have food insecurity which ranges in order of 13.33 per cent (as hungry) and 26.67 per cent (as insecure) for example, the village of Nersuiya.

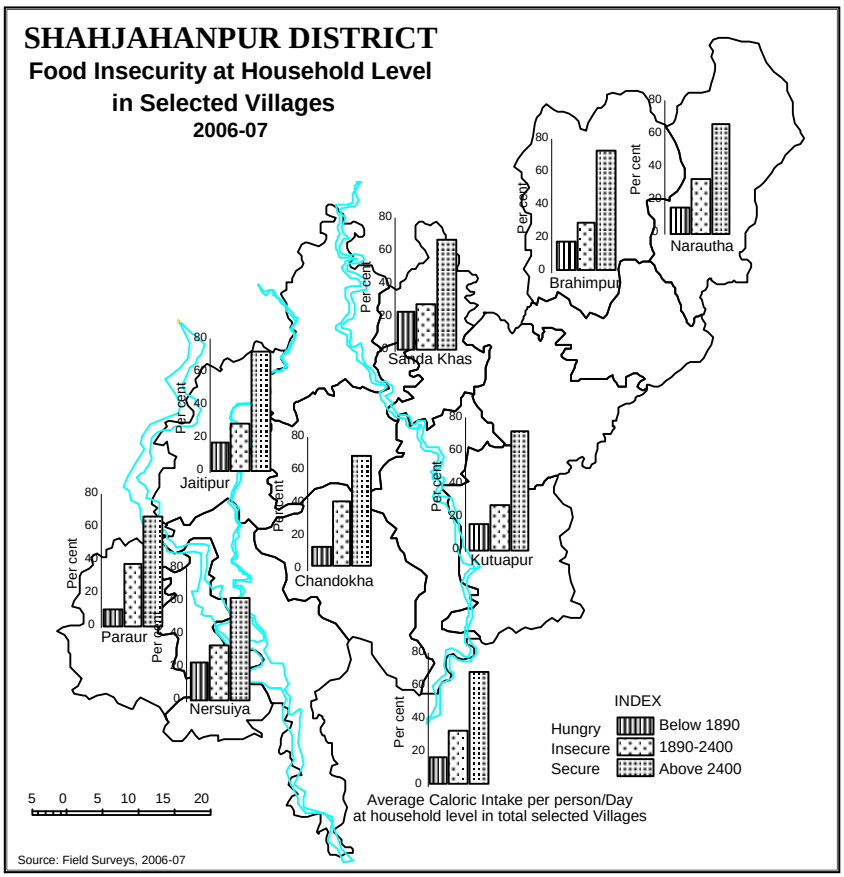

Fig. 2

(ii)Public Distribution System (PDS)

PDS is one of the basic essential components of food security as it makes an easy availability, and accessibility of food at grass root level. It handles 15 per cent total availability of rice and wheat for reasonable safety of poor. Since a large portion of the population continues to be poor food security concerns are great importance. Increasing population spreads demand for

food commodities that enhances price raise in market. It is PDS that makes supply and provide food items without increasing price for the people of above poverty line (APL), Below poverty line (BPL) and so on (Jha and Srinivasan, 2001).

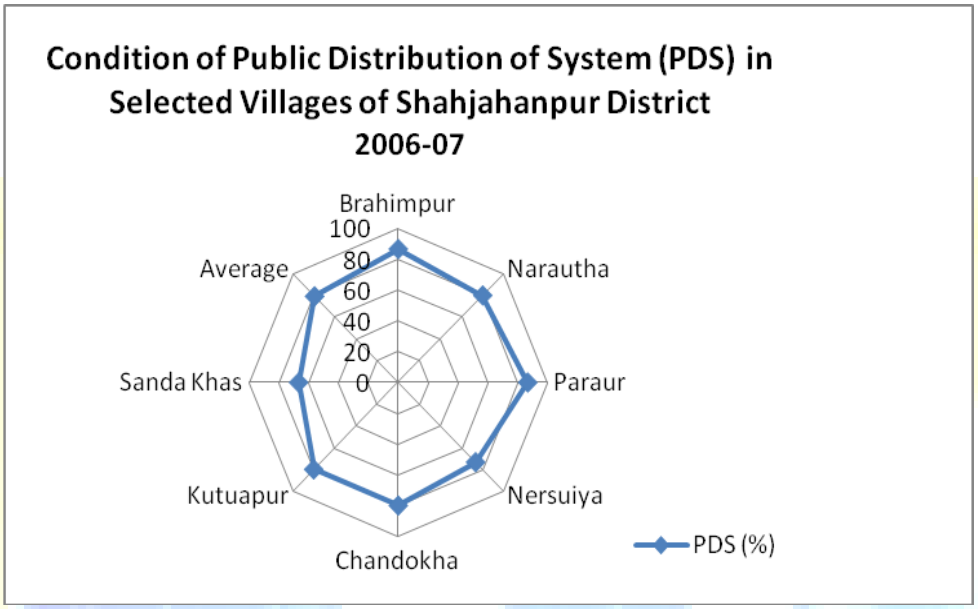

Fig.3

This why the information regarding of PDS were taken from field surveys to know the degree and deviation of insecurity .The responsibility for operating the PDS is shared between the central and state governments. The central government procures, stocks supplies grain and absorbs the costs these operations. The grain is allocated to the state, for distribution on retail PDS outlets (Dutta and Ramaswami, 2001).

Fig.2 shows, that more than 21 per cent households do not get benefits from the PDS. The functions of PDS can be measured with the distribution of commodities in prescribed quantity with month wise regularity. It has been observed in village of Sanda Khas where 1/3 households do not get PDS, In spite of having BPL and APL cards. It was due to diversion of grain to the black market, corruption, discrimination at caste and status levels and the limited purchasing of the poor (Mooij, 2001, Meeankshisudaram, 2001).

(iii) Income Level

Income determines accessibility of food and, purchasing power the people (Peet, 2007). It determines the In the case over India (at least) 30 per cent of poor households, the family income

is so low that family income spent on food, the nutritional needs are not met nutritional needs (Masud, 2009).

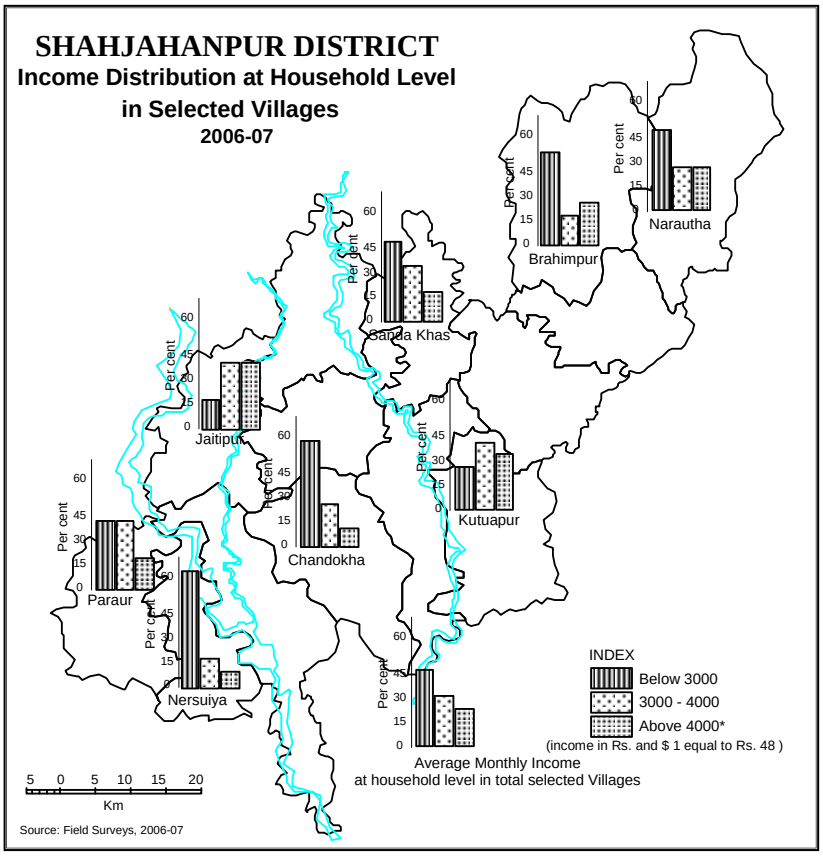

Fig.4

Fig.4 shows the income of households. More than 75 per cent households do not have income more than Rs.4000 per month and as many as 45 per cent reported an income of Rs. 3000 per month. Low income is responsible for food insecurity (Srinivsan and Jha, 1999). Poor income leads to poor conditions in household as well as the region. Nursuiya village which forms a part of Mirzapur block in which most people do not get proper employment. More than 40 per cent of the people in that village were insecure in food accessibility. The residents of the village do not get even the benefits from PDS (Fig.3). However, as many as 80 per cent households due to fragmentation of holdings, low land fertility and lack of irrigation and market facilities are unable to get due benefits (NSSO, 2005) .

(iv) Land and Livestock Rearing

Agriculture and livestock rearing are main occupation of more than 80 per cent cultivators and livestock rearers (Birthal and Ali, 2005). Rural population has a strong symbiosis for their income with agriculture and livestock that support the availability and accessibility of foods at household level. Being effective measurements for food insecurity data of livestock and agriculture have been collected from the villages

Table 1 shows that 67.49 per cent households are landowners and out of these 77.75 per cent keep livestock. Nearly 54 per cent of landowners involving rearing were found in Chandokha and Sandakhas villages. These villages are located along road route where the main business of the natives is livestock rearing for selling of milk and milk products to the markets in nearby towns. Goats and buffaloes are the mainly rearing animals in the villages.

Table 1

Land ownership and Livestock Rearing at Household Level in Selected Villages of Shahjahanpur District, 2006-07

Name of Village	Land ownerships	Livestock rearers
Brahimpur	73.34	80.00
Narautha	60.00	83.33
Paraur	73.34	93.33
Nersuiya	80.00	66.67
Chandokha	53.34	86.67
Kutuapur	66.67	80.00
Sanda Khas	53.34	86.67
Jaitipur	80.00	83.33
Average	**67.49**	**77.75**

Source: Based on Field Surveys, 2006-07

*Data show the percentage of to the total ownerships

The demand of goats is more in markets both for meat and rearing purposes. Goat meat is largely accepted by each social group than that of beef. Therefore, livestock rearing is considered to be an option of rural employment and nutritional intake per head and holds potential for food security and poverty alleviation (Khan, et al. 2008, Bujarbaruah and Rohilla, 2001).

It is depicted from the table that 77.75 per cent households keep livestock for sustenance and livelihood. The highest proportion of livestock rerears has been noted in Paraur village where a good numbers of the rearers belong to the social groups (OBC) like Gujjar, Aaheer castes who are traditional rearer of cattle, buffalo are predominant in the region. A respondent of the village Paraur told that "*Zamina achchi nahin hai, na aur koi rozi roti ke sadhan tahe pashu palat unke doodh, khad milt, bechan per paisa mil jat hai aur unhe jugle main chugai lewat hai, aur ghar mai bali-bacca rakh rakhao aasani se kar late hain."* (Land is less fertile surrounding the village and other sources for employment and livelihood are absent that is why we prefer to rear livestock. They provide us milk, manure and cash when sold. These livestock are grazed in the forested areas and can easily be handled by women and children).

(v) Size of Holdings

Agriculture provides 52.1 per cent employment to total employment in the sector per Current Daily Status (Economic Survey, 2008-09). It is main source for availability of food as well as generates income and wealth for household food security and to bring about equity in distribution of, resulting in rapid reduction in poverty levels (Ali, 2009). The total area operated under all operational holdings in the current census is found that Among the 5 major size classes of holdings, the marginal holdings (less than 1 ha) account for a maximum share of 48.2 per cent of the total number of holdings, followed by small holdings (1 to 2 ha) 26.60 per cent, semi-medium holdings (2 to 4 ha) 16.9 per cent, medium holdings (4 to 10 ha) 7.30 per cent and large holdings (10 ha and above) 1.0 per cent (Agricultural Census, 2005-06).

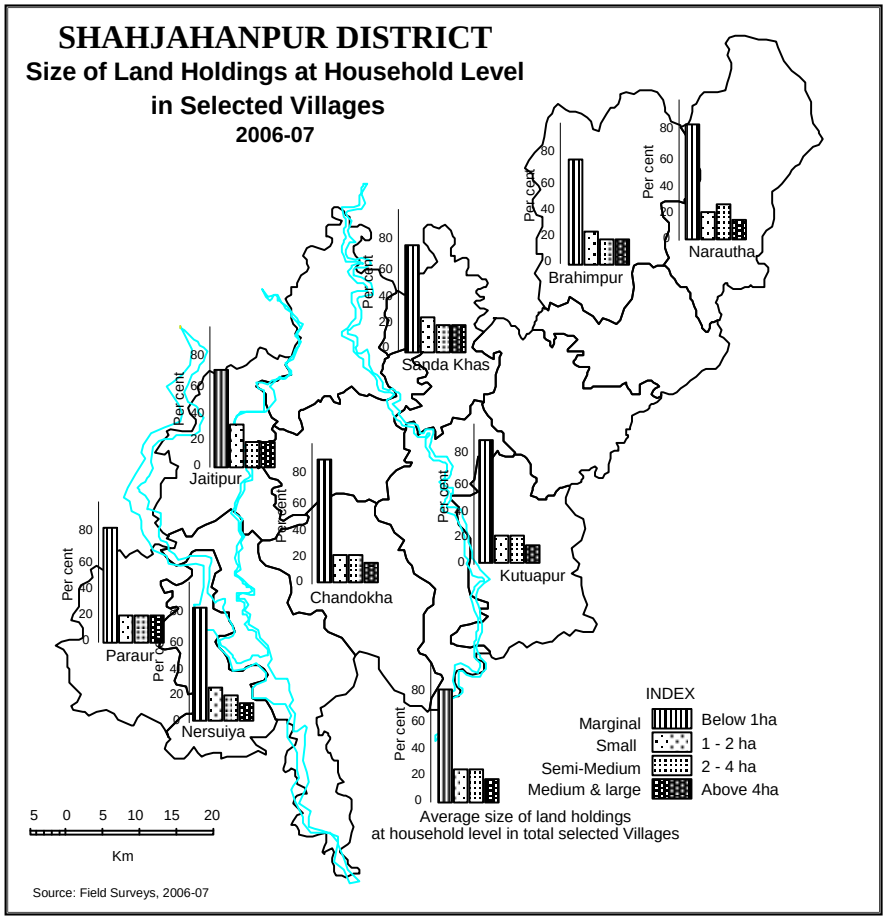

Fig.5

Fig.5 shows that the share of marginal landholders (with less than 1ha. of land) to be 78.33 per cent in total households. It is followed by the category of small farmers (10.83 per cent), semi-medium farmers (7.5 per cent), and Medium and large farmers (3.33 per cent) respectively. Marginal farmers have an advantage to get work more than 100 work days on their own fields. Lean period compel to work them as agricultural labourers to arrange food for their families at all times. As a result food insecurity is a common phenomenon among them.

(vi) Caste System

The caste system, with its societal stratification and social restrictions continues major impact on food insecurity of the Indian social set. The system generally identified with Hinduism, is also prevalent among Christian, Sikhs, and Muslims. While some barriers are broken in urban settings, many continue to persist in rural India. It is caste that inextricably linked to a proxy for social-economic status (Jacob, 2009). Working castes now known as backward class (BC) and

scheduled castes (SC) were always poor and considered at bottom in the Verna system[1] and were kept away from opportunities to require food and nutrition. That is why the households belonging to these castes are more food insecure than that of upper castes (Sarap and Mahamallik, 2001).

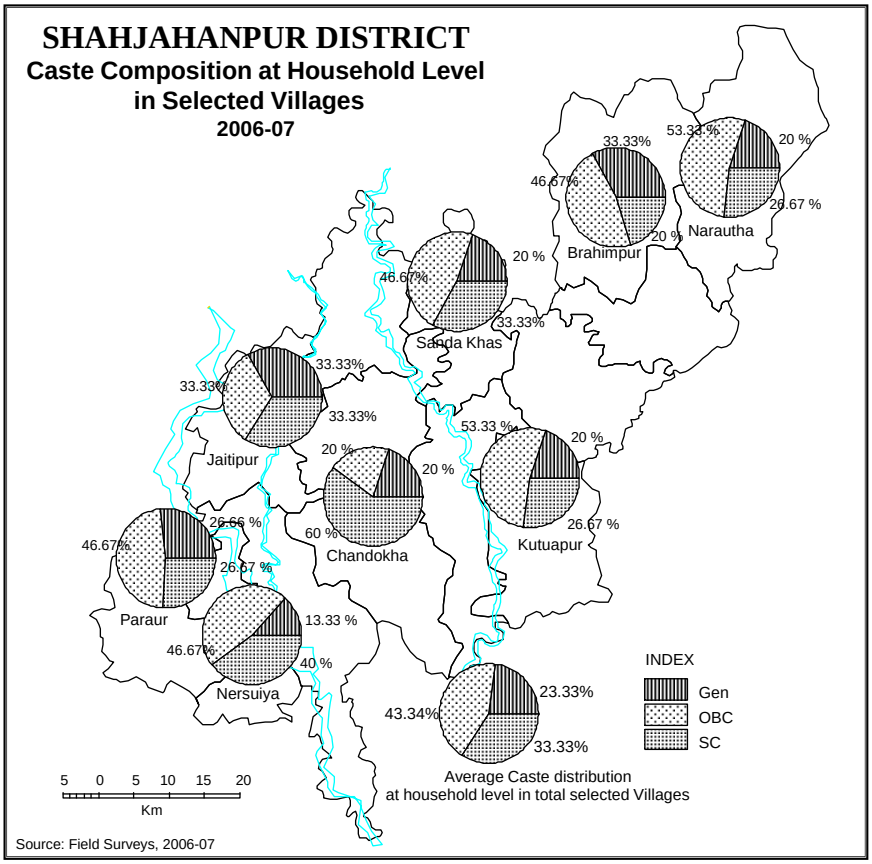

Fig. 6

Fig. 6 shows that the households belonging to general, OBC and SC categories in the order of 23.33, 43.33 and 33.33 per cent respectively. Evidently, a high proportion of food insecurity exists in SC and OBC. The National Family Health Survey-III (2005-06) clearly highlight that the stunting, wasting, Underweight and anemia in children and anemia in adults are higher among the lower castes. Moreover, income, education, basic amenities and facilities are poor in households belonging to general in all households and particularly SC and OBC categories that affect the access and absorption of food among the people of lower castes (Srinivas, 1994, Jacob, 2009).

(ii) Basic Amenities

[1] In Verna system was source of present caste hierarchy in India which divided population into four classes, Brahmins, Kshatriayas, Vaishays, and, Shudras. It was based on the occupation of the people and the complexion of the skin. In this hierarchical order Brahmans were on the top ranking followed by Kshatriayas, Vaishays, and, Shudras. In due to course of time, it become extremely rigid and high caste people exploit to low caste people.

The absorption of food is affected by house condition, sanitation, clean drinking water and health care. A person who is not healthy cannot assimilate food even if she or he consumes a balanced diet. One's state of health depends on sanitation, hygiene and the surroundings (MSSRF, 2003). According to UN-ESCAP (2006) 148 million people who struggle daily to obtain safe drinking water live in rural India.

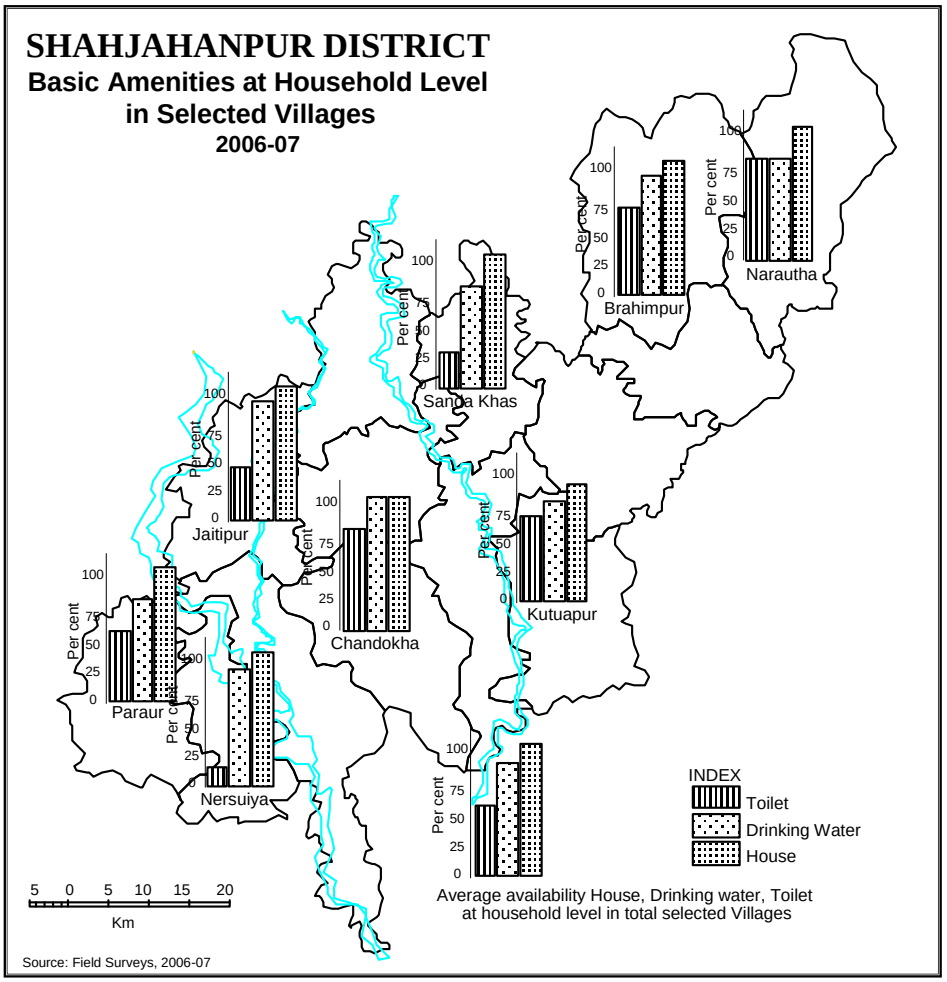

Fig.7

Therefore, the data regarding the amenities were collected to the outcome the problems connected safe drinking water that is a basic need for human beings and considered an essential component of human diet. It was noted during field surveys of villages that at least 10 per cent of households do not get safe drinking water (Fig. 7). However Chandhokha village is an exception where all sampled households have a provision of safe drinking water. It is the Amebedkar *Gram*

that gets an extra financial assistance from the State Government to develop basic amenities and facilities to build it as a model village.

Toilet facility in a house is important for the biological cycle that is considered a need for a civic society (Vyas, 2000). The toilet facilities generally are not satisfactory in the study area, where more than 26 per cent of households do not have any toilet (Fig.7). The village of Nersuiya shows that 46.67 per cent of households do not have toilet facilities. It is due to high concentration of SC and BC population (Census, 2001) and the village located in a backward block of Mirzapur

The absorption of food is affected by house condition, health care, access of clean water sanitation, nutrition, education, health care and employment (Sen, 1981, MSSF, 2003). It was observed that 99.17 per cent of the households owned homes, which are mainly in the form of huts, *kutcha*, and semi-*pucca* dwellings. Kutuapur is the only village along the road near Sehramau south where all households reported no personal dwellings (Fig. 7).

Conclusion

Food insecure households account 25 per cent among the households in selected villages with less than 2400 calories per person a day, but for more than 1890 calories the proportion of hunger comes 6.67 per cent. At least 10 per cent of households have the access to safe drinking, and more than 26 per cent households were identified without proper toilets. In spite of having BPL and APL cards, above 20 per cent card holders do not get any food commodity from PDS. Majority of households reported the monthly income of less than Rs. 3000. At least 32 per cent households were without holding, and more than 22 per cent households live without keeping livestock. Proportion of marginal farmers in the total is highest among the landholders, and majority of households belong to backward and scheduled castes. Many of the holders belong to lower caste and are either landless or marginal category of farmers and have low income with poor purchasing that leads to improper accessibility, stability and absorption of food. Resulting in poor health, and this vicious cycle continue from one generation to another.

There is an urgent need to provide opportunities for work so that, people belonging to low income can enhance their nutritional intake. However, NREGA is a good step to provide for employment Rs. 100 per day (to a member a family) for 100 days in a year. A check is needed on Public Distribution System (PDS) for an effective distribution of essential commodities for poor and needy persons. However, drinking water, sanitation and health facilities for households are needed. As the marginal and small farmers constitute the largest chunk in the society so the livestock rearing should be enhanced to improve employment, nutrition, health, and socio-economic conditions to minimize food insecurity. Besides, to make food secure farmers, pension facilities must be provided for them as they are given to workers in organized sectors.

There is need of investments in vital agriculture infrastructure, credit linkages and encouraging the use of latest techniques, motivate each district/ block to achieve local self-sufficiency in foodgrain production. However, instead of concentrating only on rice or wheat, the food crop with a potential in the area must be encouraged. Creation of necessary infrastructure like irrigation facilities will also simulate private investments for foodgrains production on a sustainable basis to create massive employment and reduce the incidence of poverty (Goyal, 2002) and purchasing power to the people in rural areas.

References

Agricultural Census (2005-06) http://des.kar.nic.in/arc/highlights1.pdf

Ahmad, S.N. (2007). 'Status of Food Security in Koil Tehsil of Aligarh District', *Indian Journal of Landscape Systems and Ecological Studies*, 30 (1): 67-76.

Ali, M. (2009). *Geography of Agricultural Marketing-At Grass Roots Levels*, Pacific Publication, Delhi.

Ayres, W.S. and McCalla A.F. (1996). 'Rural Development, Agriculture, and Food Security', *Finance & Development*, December: 8-11.

Bhandari, L. and Dubey, A. (2001). 'Calorie Deficiency, Poverty and the Public Distribution System- A Household Level Analysis for 1993-94', *RGICS Working Paper (24)*.

Birthal, P. S. and Ali, J. (2005). Potential of Livestock Sector in Rural Transformation, In: '*Rural Transformation in India: The Role of Non-farm Sector',* R Nayyar and A. N Sharma (eds)., Manohar Publishers, New Delhi.

Bujarbaruah, K.M. and Rohilla, P.P. (2001). 'Role of Livestock in Farming System of NEH Region', *Indian Farming*, 51 (9): 39-40.

Census, (2001). Primary Census Abstract-State/District-Village Level.

Chakraborty, D. (2005). 'Food Security in India Policy challenges and responses', RGICS *Brief paper Feb 2005.*

Chakravarity, S. and Dand, S.A. (2006). 'Food Insecurity in Gujrat: A Study of Two Rural Populations', *Economic Political Weekly*, 41 (22):2248-58.

CNN-IBN (2009). *Drought-hit Farmers selling Wives to survive in Bundelkhand* http://johnnydbombay.mid-day.com/note/8329/cnnibn's-"face-the-nation"-covers-trivial.html

Drezee, J. and Sen, A. (2008). 'Hunger and Public Action', Oxford University Press, New Delhi.

Dutta, B.and Ramaswami, B. (2001). 'Targeting and Efficiency in the Public Distribution System: Case of Andhara Pradesh and Maharastra', *Economic Political Weekly*, 36(18):1524-32.

Economic Survey (2008-09) http://indiabudget.nic.in

FAO (2002). '*The State of Food insecurity in the World-2001'*, Food and Agricultural Organization, Rome, http://www.fao.org.

FAO, (1996). *Food for All*, Report by Food and Agricultural Organization on the occasion of the World Food Summit, 13-17, November.

FAO (2006). 'The State of Food Insecurity in the World 2006 Eradicating World Hunger -taking stock ten years after the World Food Summit, http://www.fao.org

Goyal, P. (2002). Food Security in India, *The Hindu*, January 10.

Jacob, K.S. (2009). Caste and Inequalities in Health, *The Hindu*, 132 (200): 10.

Jha, S. and Srinivasan, P.V. (2001). 'Taking the PDS to the Poor: Directions for Further Reform', *Economic & Political Weekly*, 36 (39): 3779-86.

Khan, et al. (2008). 'Livestock Revolution in Monsoon Asia during the Post Economic Reform Period', Asian Profile, 36 (5), pp.529-44.

Khullar, D.R. (2006). India: A Comprehensive Geography, Kalyani Publishers, New Delhi.

Masud, K.A. (2009). *Adapting to Global Economic Melt down- the case of South Asia*, South Asian Analysis Group, paper No.3352, Aug 12.

Meeankshisudaram, S.S. (2001). Public Distribution System: Safety Net for the Poor, in 'Towards *Hunger Free India: Agenda and Imperatives',* M.D. Ashthana, and R. Pedro, (eds), Manohar Publishers, New Delhi.

Mooij, J.(2001). 'Targeted Food Distribution in Karnataka and Bihar', ibid Manohar Publishers, New Delhi.

MSSRF, (2003). *Food Insecurity Atlas of Rural India*, M S Swaminathan Foundation, Chennai.

National Family Health Survey-III (2005-06). www.nnfhsindia.org.

NSSO (2005). '*Situation Assessment Survey of Farmers Households*, NSS 59th round (January-December 2003, Report No 498). Government of India.

Pasricha, N.S. and Singh, R. (2005). 'Land Degradation and Household Food Security in India', *Agricultural Situation in India*, Vol. 62 (3):173.

Peet, R. (2007). *Geography of Power: Making Global Economic Policy*, Zed Books, New York.

Roa, V.M. and Deshpande, R.S. (2002). Food Security in Drought -Prone Areas-A Study in Karnataka. *Economic & Political Weekly* (August 31):3677-81.

Roa, C.H.H. (2005). Agriculture Food Security, Poverty and Environment, Oxford University Press, New Delhi.

Sarap, K. and Mahamallik, M. (2001). Food security, Coping Strategy and Livelihood Pattern among Households in Tribal Areas of Orissa, in *Towards Hunger Free India-Agenda and Imperatives*, M.D. Asthana, and P Medrano (eds.) Manohar Publishers, New Delhi,: 233-267.

Sen, A.K. (1981). *Poverty and Famine: An Essay on Entitlement and Deprivation*. Oxford University Press, New Delhi.

Srinivas, M. N. (1994). The Indian village: Myth and reality. In: *The Dominant Caste and Other Essays*. Oxford University Press, Oxford

Srinivsan, P.V. and Jha, S. (1999), 'Food Security through Price Stabilization', *Economic & Political Weekly*, 34 (46 & 47):3299-04.

Swaminathan, M. (2000). 'Weakening Welfare: The Public Distribution of Food in India', *Leftword.*

Swaminathan, M.S. (1988). Sustainable Food Nutrition Security for the 1990's, *Agricultural Situation in India*, 42 (5):363-67.

UN-ESCAP (2006). *The Millennium Development Goals Report* http://www.mdgasiapacific.org.

Vyas, V.S. (2000). 'Ensuring Food Security-The State, Market and Civil Society', *Economic & Political Weekly*, 35 (50).

WEP (2008). *WFP's Response to Global Food Crisis Rome,* 10 May 2008 http://www.un.org/

WHO (2002).*The World Health Report-Reducing Risks, Promoting Healthy* Life. www.who.int/whr/2002/en/