

The Contemporary Issues of Food Security of the Bhuiya of Jharkhand

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Abstract

Food is indispensable for existence. Hence, the issue of food security is a matter of great concern for the whole mankind. One needs to address the issue of food security at different levels: global, regional, household, and individual. The present paper dealt with food security status of the Bhuiya community of Palamu district of Jharkhand using primary data. It was found that the state of food security was grave among Bhuiya households. The community struggled for food for existence and there were no or few sustainable livelihood options available to them. This in turn made them vulnerable and food insecure, negatively affecting their productivity and efficiency and keeping them trapped in the vicious cycle of poverty and malnutrition.

Keywords: food security, sustainable livelihood, vulnerable, productivity

JEL Classification: Q18, O13, O15

Paper Submission Date : September 21, 2018 ; **Paper sent back for Revision :** February 6, 2019 ; **Paper Acceptance Date :** February 25, 2019

Food is a basic need for survival. The concept of food security has been widely discussed and debated ever since the situation of food crisis emerged in the 1970s. The issue since then has taken different forms, and the definition has thus evolved. In today's scenario, the problem of global food security has become all the more important due to global climate change. The present paper explores the food security status of the Bhuiya community in the Palamu district of Jharkhand with a special focus on household food security status. It will be seen that despite attaining so many years of independence and separate statehood, food security has still not been ensured to all. The present paper deals with status of food security, intra-household food distribution, and sources of food of Bhuiya community along with the coping mechanisms adopted by them in times of food shortages.

Literature Review

The concept of food security has evolved ever since the definition of food security has surfaced. There are different facets of the food security concept. Food security was defined in 1974 by the World Food Summit as, “availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices” (FAO, 2003, p. 27). It is centred on two sub-concepts : food availability and food entitlement.

Again in the year 1996 at Rome, the World Food Summit adopted a still more complex definition and defined food security as :

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DOI : 10.17010/aijer/2019/v8i1/142713

Food security, at the individual, household, national, regional and global levels [is achieved] when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (FAO, 2003, p. 28)

Components of Food Security

Prof. M. S. Swaminathan showed that food security has three components. The first is food availability, which depends on food production and imports. The second is food access, which depends on purchasing power. The third is food absorption, which is a function of safe drinking water, environmental hygiene, primary health care, and education. Food security also depends on income levels, income distribution, employment pattern, and prices of food (M. S. Swaminathan Research Foundation, 2001).

Food availability refers to whether sufficient food is available to households and individuals. This has also to do with production of enough food in the country and the world (Gregory & Ingram, 2008). Food access means that households and individuals have resources to obtain food for them. Food utilization means that the food consumed is absorbed by the individual. This means that apart from availability and access, what is needed is hygiene, sanitation, and clean drinking water so that all physiological needs are fulfilled. Food sustainability means that all the other three components are fulfilled at any time. This means that fluctuations of any kind, whether financial or climatic do not have to affect individuals negatively (Ingram, Gregory, & Izac, 2008).

Levels of Food Security

Researchers have shown that there can be different levels of food security as outlined below :

(1) First is Global Level Food Security, which relates to whether global demand for food equals global supply of food. There can be people living at different extremes simultaneously. There are roughly 1 billion hungry people in the world, heavily concentrated in poor countries, and also a similar number of obese people, located especially in richer countries but increasingly in poor and middle-income countries as well. The amount of food currently produced is seemingly enough for everyone, leaving 'only' a problem of distribution across individuals. But while arithmetically correct, this simplistic description does not necessarily provide a practical means of reducing hunger in poor countries.

(2) Secondly, we have National Level Food Security, which addresses the concept at the national level tracing whether the aggregate supply is equal to aggregate demand in the country. This national supply can be influenced by international supplies as well.

(3) At the third level, we have Household Level Food Security. This refers to basically the definition propounded by the World Food Summit. It means access to adequate food at all times. However, security here has been used in a probabilistic sense, meaning adequacy of food intake today as well as availability of sufficient food in the future as well.

(4) And lastly, we have the concept of Individual Level Food Security, which addresses the issue as to how the food is distributed within the household. In times of food shortage, the food is distributed differently in households. The household prioritizes individuals differently in times of food shortage. The concept of individual level food security takes into account availability of food per person in the household (Warr, 2014).

In the Indian context, economists have shown that the state of food security is grave among the tribals in Odisha where they struggle even for two square meals a day (Patel, 2016).

Prasad, Rao, Reddy, Sivanarayana, and Rao (2016) showed that calorie deficiency as measured with respect to the standard norm outlined by National Institute of Nutrition is prevalent in both rural and urban pockets of Andhra Pradesh. The decline in per capita consumption has been due to reduced purchasing power resulting from stagnant value addition by the agriculture sector in total output.

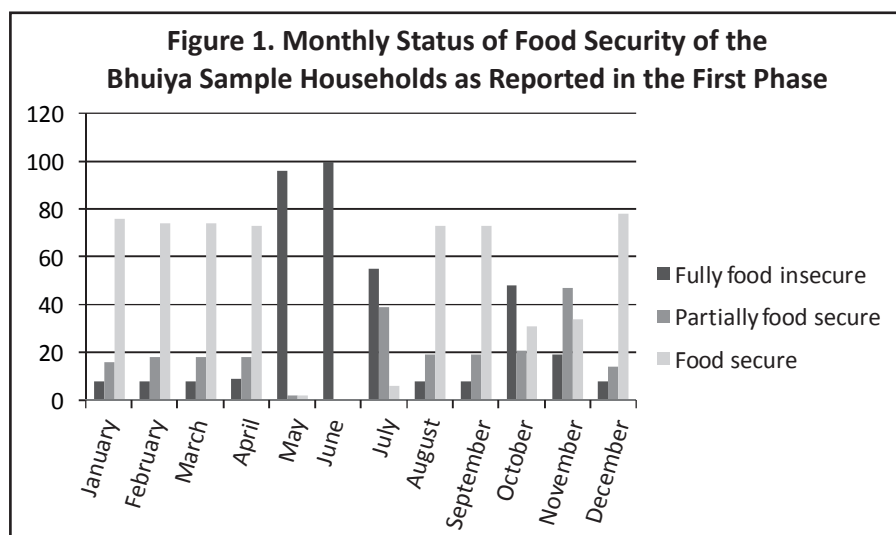
Methodology

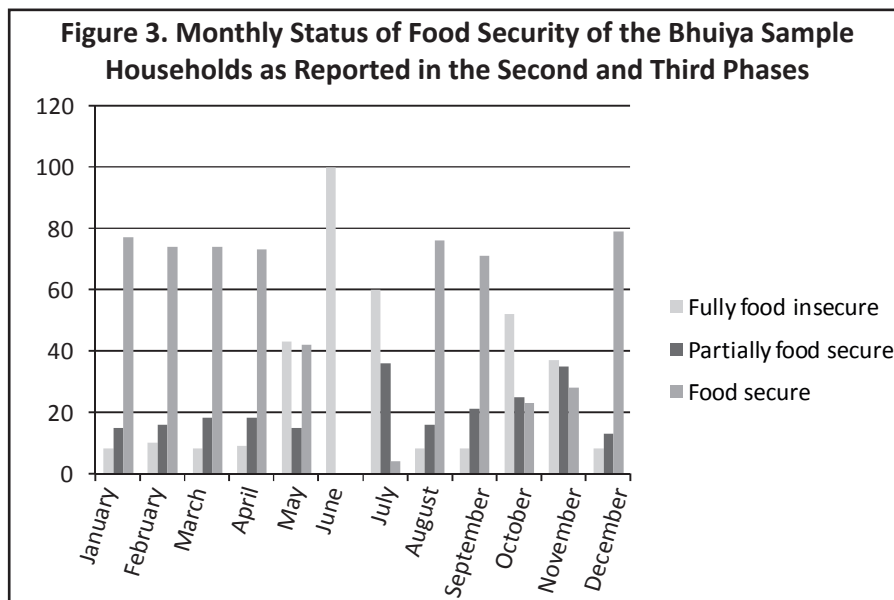
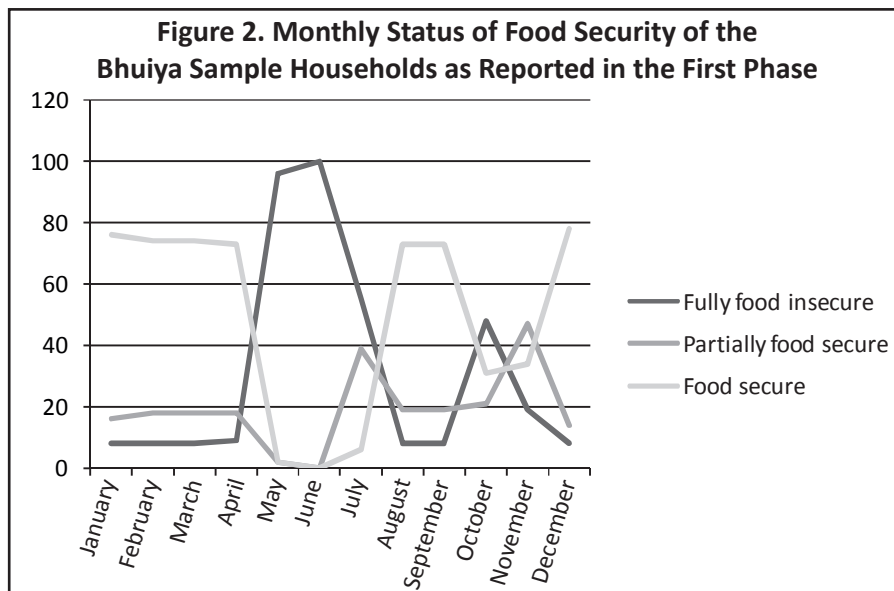
The paper is based entirely on primary data collected from Chhatarpur block of Palamu District of Jharkhand. Altogether, 62 households were surveyed to explore the different aspects of food security. The survey made use of village schedule, household schedule, focussed group discussions, and key informant interview method. In order to capture seasonality in consumption pattern, data were collected in three phases: once between October and November 2013, then during the month of February 2014, and lastly in the month of May 2014 using the technique based on recall period. Emphasis was laid to capture different aspects of food security, coping mechanism, and migration of these households.

Analysis and Results

(1) Food Security Status of the Bhuiya Sample Households : Food is an indispensable requirement for human existence. Even after so many years of independence, achieving double digit growth rate, and enactment of Food Security Act, India has failed to ensure food to its entire population. The present section explores the food security status of the Bhuiya community in the Palamu district of Jharkhand. The study reveals that the food security status of the Bhuiya varies throughout the year because they do not have access to sustainable sources of livelihood. More specifically, although agriculture is the mainstay of the Bhuiya, they are not cultivators ; instead, they are agricultural labourers. So, the food security status varies in line with the agriculture season/cycle. Also, being just agricultural labourers, the earning prospects are not promising enough to ensure timely availability of quality food to them. Thus, endangering their food security status.

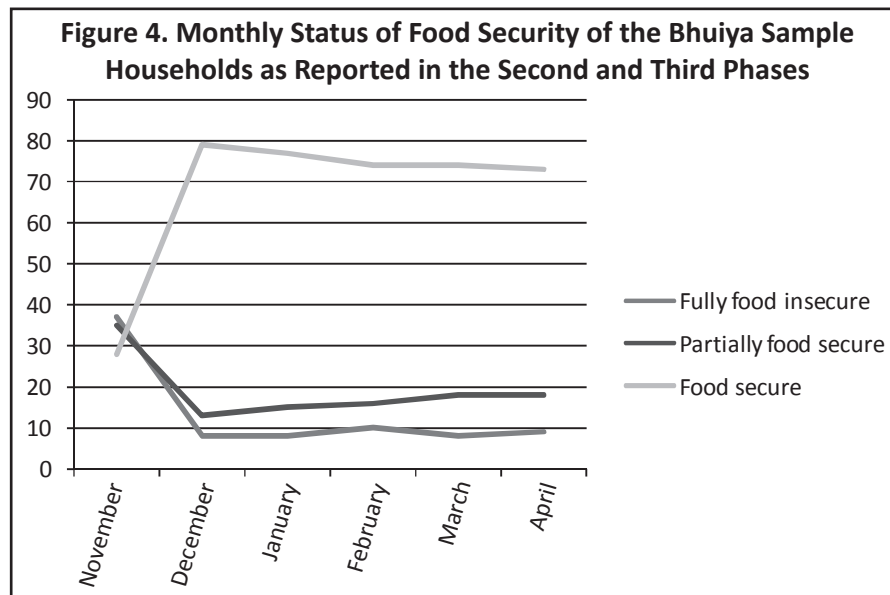
The data on the food security status of the Bhuiya households were collected in three phases. The responses of the first phase revealed that two parts of the year are considered critical months for the Bhuiya households: these





are months of May, June, and July and the other is October. These are exactly those months when not much work exists on farms. The grave status of food security is reflected in the fact that as large as 55% and 48% of the households were food insecure in the months of July and October, respectively ; while 39% and 47% of the households were partially food secure in the months of July and November, respectively. This partial security is because during these months, they start migrating to work as agricultural labourers or casual wage labourers. There were altogether 8% of the households which remained food insecure throughout the year. The Figures 1, 2, 3, and 4 present the monthly food security status of the Bhuiya sample households in the different phases of the survey.

The study reveals an important fact about the food security status of the households which is that it is dynamic in nature. This means the status of food security keeps changing with time. This is reflected in the decline in the number of households which were food insecure during the second and the third phases in comparison to the first one. As far as the second and third phases are concerned as compared to the first phase, the number of households



which were food insecure fell in the month of May, while the number increased in the months of October and November. The decline in May can be explained by the fact that earlier, men who worked as casual wage labourers from the Bhuiya households returned from work before Holi festival, but now, they return in the last week of April or the first week of May with earnings, and so, households were food secure in the month of May. Also, another reason for more households being food secure in the month of May is that there were some households which had migrated to work as agricultural labour for harvesting wheat during the months of March and April in the year 2014, and they returned with earnings in kind, which met their food requirement in the months of April - May. This led to changes in the pattern of food security status of the households.

In general, there was a high incidence of food insecurity during the month of June. This is because of excessive heat, the climate is not conducive either for migration or for collection of wood as the region is plagued by 'loo', the local heat wave. Again, the households were food insecure during the months of October and November. This occurs because the income earned from agricultural labour is spent during the months of August and September and when they migrate as casual wage labour in the month of October, they do not get wages immediately; rather, wages are received in the month of November. The wages received from migration provided them food in the months of December and further. This is reflected in the decline in the number of food insecure households, decrease in the number of households which were partially secure, and increase in the number of households which were food secure in the following months of December, January, February, March, and April.

(2) Intra Household Food Distribution : The study of food security is multi-layered. The issue of food insecurity exists at regional level, at community level, at household level, and at individual level. The distribution of food within the house gives an insight into the status of food security at the household level. Thus, apart from accessibility, availability, and absorption, one needs to address the distributional aspect of food to ensure food security at the household level.

The Table 1 gives us an idea as to how food was distributed within the family during the two seasons, that is, during normal season and during the food shortage month/lean period among the Bhuiya community. The categories identified have been put as child, male, female, old, male and female combined, and single member family. Corresponding to the single-member family, the entry in priority column is neutral, showing that there is no need of priority in case of single headed families.

Table 1. Intra - Household Distribution of Food as per Priority During the Normal and Food Shortage Months/Lean Period

Category	Type of Priority	Normal Season	Food Shortage Months/Lean Period
Children	1st	77	77
	2nd	-	-
Male	1st	17	17
	2nd	74	74
Female	1st	2	2
	2nd	20	19
	3rd	74	74
Old	1st	-	-
	2nd	2	2
Male & Female	1st	-	-
	2nd	-	-
Single Member Family	Neutral	5	-

Note. The figures are in terms of percentage of households.

Table 2. Intra - Household Food Distribution Pattern During Normal and Food Shortage Months

Pattern of Food Distribution	Normal Season	Food Shortage Months/Lean Period
Equal distribution	8	5
Need based distribution	71	0
Less to females as well as the old	6	75
Occasionally less to females	10	5
More to children and less to males and females both	0	10
More to children, equal to males and females, less to the old	0	0

Note. The figures are in terms of percentage of households

The Table 1 shows that during both the seasons, the first priority was always given to children , then to men, and then to women as reflected by the fact that 77% households among the Bhuiya reported that the first priority was given to children, while the old were given the second priority.

(3) The Pattern of Intra - Household Food Distribution Among the Sample Households During the Normal and Food Shortage Months : As far as the pattern of intra-household food distribution is concerned, it can be seen from the Table 2 that in majority of the households, the distribution of food across the different categories was need based only in the normal season and not during the food shortage months. There was equal distribution of food among very few households. During the food shortage months, the females and the old got less to eat in 75% of the Bhuiya households. Hence, there existed intra-household inequality in the distribution of food among the sample households with females and the old getting lesser food during the lean period.

(4) Sources of Food Among the Bhuiya Sample Households : The following section presents the chief sources of food of the Bhuiya. As can be seen from the Table 3, rice is the chief source of nutrition. The Bhuiya did not own any/much of land. Hence, their own production contributed very less in total consumption of all food grains and eatables. Market purchases are the main source of rice. Around 85% of rice was purchased from the market. They

also consumed some amount of maize, edible oil, meat, fish, and eggs, which were purchased mainly from the market. Vegetables and pulses were also purchased from the market. As far as the Public Distribution System (PDS) is concerned, only rice was available at such outlets. The average amount of rice consumed during October - November was 63.31 kg per household and there was a gap of 14.27 kg between the amount consumed and the amount required. The requirement of vegetables and pulses as well were not met. The respondents diversified their consumption basket by consuming wheat and maize apart from rice as staple food occasionally.

Another observation that comes to the fore is that apart from market purchases and PDS, rice was received as payment in lieu of labour rendered on farms. During the second phase, the average amount of rice consumed was 77.98 kg, which was mainly obtained from market purchases. More specifically, 56.53% of the amount consumed was obtained from market purchases, around 29% was obtained from Public Distribution System (PDS), and around 15% was obtained as wages received in kind. Some vegetables were grown in their homestead land during this time ; so, the gap between the amount consumed and their requirement was relatively low in case of vegetables during this time. The Bhuiya grew around 40% of the vegetables consumed by them and bought 60% of the remaining from the market during this time. All the pulses, edible oil, and meat were bought from the market. This is the time when the gap between amount required and the amount consumed was the least, which was because the earnings from casual wage labour and agricultural labour were received during these months.

As far as the third phase is concerned, the average amount of rice consumed was 61.15 kg, which was either

Table 3. Consumption Basket of the Bhuiya Households in the Last One Month Preceding the Date of Survey

Foodgrains	Consumption per Household (in kg) (a)	Total Requirement as Perceived by the Households (in kg) (b)	Share of the Various Sources of Food in Total Consumption (in percentage)					Gap or Deficiency per Household (in kg) (b-a)
			Own Production	Market Purchases	PDS	Obtained from Wages Received in Kind	CPR	
First Phase (October - November)								
Rice	63.31	77.58	0	84.99	16.31	0	-	14.27
Wheat	0.27	1.13	0	100	0	0	-	0.85
Maize	5.82	11.87	8.31	91.68	-	0	-	6.04
Pulses	0.02	1.13	0	100	-	0	-	0.93
Vegetables	2.14	7.13	4.53	95.47	-	-	-	4.99
Potato, roots, and tubers	2.29	4.94	0	100	-	-	-	2.65
Edible oil	0.18	0.80	0	100	-	-	-	0.62
Meat, fish, and egg	0.92	2.57	0	100	-	-	-	1.65
Fruits and other eatables from forest	0	0	-	-	-	-	-	-
Second Phase (January - February)								
Rice	77.98	79.03	0	56.53	28.58	14.89	-	1.05
Wheat	0	0	-	-	-	-	-	-
Maize	0	0	-	-	-	-	-	-
Pulses	0.27	1.18	0	100	-	-	-	0.91
Vegetables	4.63	6.37	39.02	60.18	-	-	-	1.74

Potato, roots, and tubers	3.06	4.13	0	100	-	-	-	1.06
Edible oil	0.27	0.84	0	100	-	-	-	0.57
Meat, fish, and egg	0.97	2.17	0	100	-	-	-	1.20
Fruits and other eatables from forest	0	0	-	-	-	-	-	-

Third Phase (April - May)

Rice	61.15	76.71	0	77.97	0	22.03	-	15.56
Wheat	5.79	8.63	0	0	-	100	-	2.84
Maize	0.84	1.95	0	100	-	-	-	1.11
Sattu (wheat & gram, maize)	3.71	6.27	2.17	-	-	97.83	-	2.56
Pulses	1.01	1.27	1.59	0	0	98.60	-	0.25
Vegetables	1.43	5.76	0	100	-	0	-	4.33
Potato, roots, and tubers	2.02	4.18	0	100	-	0	-	2.16
Edible oil	0.22	0.88	0	100	-	-	-	0.66
Meat, fish, and egg	0.51	1.98	0	100	-	-	-	1.47
Fruits and other eatables from forest	0	0	-	-	-	-	-	-

purchased from the market or was earned in kind in return for working as agricultural labour. During this phase also, very little maize, vegetables, edible oil, and meat consumed was obtained from the market. Some amount of pulses (masoor, arhar, khesari) were obtained in kind for working as agricultural labour. Thus, pulses were taken only during the months of March - May and that too in very little amount. The overall conclusion is that the working of the PDS was very poor during this period. The households did not receive rice for more than 3 months.

Thus, we can see that they also consumed an unbalanced diet. They did not consume fruits or milk in any of the months. They neither consumed milk or milk products. There occurred diversification in the food items consumed. They ate maize in September, October, and November as it came from their own production and gram flour, maize flour, and wheat flour in April, May, and June.

It was observed that the Bhuiya usually consumed '*maadbhat*'/'*paanibhaat*' with salt and green chilli. Pulses were taken occasionally, especially during festivals.

(5) Reasons for Food Insecurity Among the Sample Households : There can be many reasons behind food insecurity of the Bhuiya community. The Table 4 outlines the main reasons for food insecurity among the Bhuiya households. Around 63% of the Bhuiya households reported that they did not get work in May and June. This is

Table 4. Contemporary Reasons Behind Food Insecurity in the Critical Months Among the Sample Households

Reasons	Households
Extreme of season/climate.	16
Lack of availability of work within their native place as well as absence of migration.	61
Lack of availability of work and non receipt of entitlements from PDS.	13
Others (not getting ration, chronic diseases, no male worker in the household, agricultural work not available for long period, absence of migration, age factor, etc.).	10

Note. Figures are in percentage of households reporting the corresponding reasons.

Table 5. Reasons Behind Food Insecurity in the Critical Months a Decade Ago Among the Sample Households

Reasons	Households
Extreme of season/climate.	0
Low price of wood and low income.	0
Lack of availability of work within their native place, low wage rates, as well as absence of migration as an alternative.	97
Non receipt of entitlements from PDS.	0
Others (not getting ration, chronic diseases, no male worker in the household, agricultural work not available for long period, absence of migration, age factor etc.).	3

Note. Figures are in percentage of households reporting the corresponding reasons.

because due to excessive heat and 'loo', neither did they go to forests to collect wood nor did they migrate as casual wage labourers or as agricultural labourers. Again, the state of Public Distribution System is very poor. Disease is another important issue where men in 12 households suffered from chronic tuberculosis. This not only reduced their efficiency, but also meant that whatever little they earned was spent on medicines and treatment in private health centres as no proper services were provided by the public health centres.

(6) Reasons for Food Insecurity Among the Sample Households a Decade Ago : Making a comparison, the main reason for food insecurity among the Bhuiya a decade ago, as mentioned in Table 5, was that they did not migrate earlier as casual wage labour and also did not sell wood. The agricultural wage rates were low, and they did not have alternatives in the village. This suggests that with time, the Bhuiya diversified their livelihood options, although these options were also not very promising or sustainable.

(7) Coping Mechanisms of the Sample Households : The coping mechanism of the Bhuiya was very limited as presented in the Table 6. They lowered the amount of food intake as well as the quality of food grains and reduced the number of meals in order to cope up with crisis situations. They also resorted to loan from other well off villagers. Advance from contractors was another option they resorted to as a coping mechanism. Around 60% of the households reported that they took advances from the contractors during the lean period. Again, they used to

Table 6. Multiple Coping Strategies Adopted by the Sample Households

Multiple coping strategies	Households
Consume less food	100
Consume lower quality of food (rice)	100
Reduce the number of meals a day	86
Taking advance from local contractor	60
Migrated temporally for casual wage labour or agricultural labour	90
Sold livestock	2
Loan from villagers	30
Loan from relatives	4
Goods taken at credit from grocery shop	3
Collect edible roots & tubers from forest	6

Note. The figures are in terms of percentage of households and one household adopted more than one strategy at a time.

have '*gethi*' and '*chokar saag*' during the lean period earlier, but during the study period, these were no longer available in the forests. Only 10% of the sample households use '*gethi*' and '*chokar saag*' during the lean period. Migration by the Bhuiya as agricultural wage labour (July and November - December) and as casual wage labour (October - November) was also a coping strategy which occurred just after the agriculture lean season.

(8) Composition of the Meals Usually Taken by the Sample Households in Different Months of the Year : The Table 7 gives a description of the meals usually taken by the sample households. The Bhuiya diversified their consumption basket by occasionally taking wheat, maize, *ghatta* (prepared from maize flour), and *sattu* (Bengal gram flour) in their meals. They consumed pulses obtained as wages in exchange of their labour which was very insufficient in amount. Vegetables found place in their meals only in case of either robust harvest which made them available at low prices or during rainy season, when they grew the same themselves on their *bari* land. While maize and *ghatta* were consumed in lean period in the months of September and October with the coming of fresh harvests in the region, on the other hand, wheat and *sattu* were consumed in the summer season. Thus, we can see that there was little diversification in the food taken by the Bhuiya and also they did not take a balanced diet.

Table 7. Meals Usually Taken by the Sample Households in Different Months of a Year

Months	Morning	Noon	Night
January	<i>Bhat</i> , vegetables, pulses occasionally	<i>Bhat</i> , vegetables	<i>Bhat</i> , vegetables, pulses occasionally
February	<i>Bhat</i> , vegetables, pulses occasionally	<i>Bhat</i> , vegetables	<i>Bhat</i> , vegetables, pulses occasionally
March	<i>Bhat</i> , pulses occasionally	<i>Bhat</i>	<i>Bhat</i> , pulses occasionally
April	<i>Bhat</i> , pulses, <i>sattu</i>	<i>Bhat</i> , <i>sattu</i>	<i>Bhat</i> , pulses
May	<i>Bhat</i> , pulses, <i>sattu</i>	<i>Bhat</i> , <i>sattu</i>	<i>Bhat</i> , pulses
June	<i>Bhat</i> , pulses, <i>sattu</i>	<i>Bhat</i> , <i>sattu</i>	<i>Bhat</i> , pulses
July	<i>Bhat</i> , pulses,	<i>Bhat</i> ,	<i>Bhat</i> , pulses
August	<i>Bhat</i> , pulses, vegetables	<i>Bhat</i> ,	<i>Bhat</i> , pulses
September	<i>Bhat</i> , pulses, maize ghata	<i>Bhat</i> , maize <i>ghatta</i>	<i>Bhat</i> , pulses
October	<i>Bhat</i> , pulses, maize ghata, vegetables	<i>Bhat</i> , maize <i>ghatta</i>	<i>Bhat</i> , pulses
November	<i>Bhat</i> , pulses, vegetables	<i>Bhat</i> ,	<i>Bhat</i> , pulses
December	<i>Bhat</i> , pulses, vegetables	<i>Bhat</i> ,	<i>Bhat</i> , pulses

Conclusion

Thus, it has been found that the food security status of the Bhuiya was appalling. They did not own much of land and lacked sustainable livelihood options, which explains their deplorable state of affairs. The meagre jobs that they could take was casual wage labour or agricultural labour or sale of wood. The earnings from these options did not prove to be enough to provide a decent state of living and nutrition. What added to their woes was the poor functioning of the public distribution systems which could have proven as an alternative option to ensure at least food security. They lack in terms of training and education, which renders them unqualified to be employed in bright avenues. Weak and unfed, they are more prone to diseases, making them unfit to be gainfully employed and reinforcing the vicious circle of poverty, malnutrition, illiteracy, unemployment, and back to poverty again. In a comparison, the status of food security was alarming among the other communities as well like the tribals in Odisha and calorie deficiency was faced even in Andhra Pradesh.

Research and Policy Implications

The study highlights the fact that food security is a matter of grave concern in different pockets of the country even after ensuring robust harvest across the nation in the recent years. In order to improve the level of food security at the regional level, one needs to focus on sustainable livelihood options in which MGNREGA can play an important role, especially during the lean periods. One of the policy implications can be public intervention of more targeted type because the present mechanism of the public distribution system plagued by many loopholes is inadequate in addressing the issue of food security among the Bhuiya.

Limitations of the Study and Scope for Further Research

The scope of the paper is limited in the sense that it explores the status of food security of only the Bhuiya community using a limited sample size and that too in isolation without considering the role of the public distribution system and other forms of government intervention. The study does not quantify the level of food insecurity using any anthropometric measures or calorie norms as outlined by the National Institute of Nutrition. Thus, the scope for further research can involve methods, including effective ways to measure and quantify the level of food insecurity using standard measurement norms and comparison of food security status of Bhuiya with other communities both intra as well as inter regional taking into account factors like a sufficiently large sample size, impact of different forms of public intervention, implementation of new economic policy in the country to mention a few along with exploring their sustainable livelihood options.

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