

## **FOOD SECURITY AT THE HOUSEHOLD LEVEL THROUGH FOOD CHANNELS**

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### **ABSTRACT**

It has been rightly stated that availability of food does not guarantee access to food. Nutrition is confirmed only when there is adequacy of nutrient intake in the daily diet. Food access of a locality with reference to the food requirement of the families residing there and food purchased or obtained through various channels would give an insight into the real picture of food security. This study was undertaken in Kalliyoar Panchayat of Nemom block, among 100 families. The objective of the study was to assess the various food channels in a locality and to study the extent of utilization of these channels to accomplish food sufficiency. The socio economic status of the respondents revealed a monthly income in the range of the 5000 to 8000/- and that majority of them possessed only upto 3 cents of land. The retails shops were mainly depended upon for the purchase of cereals. The PDS was not utilized to a satisfactory extent. When the *percapita* intake of food was compared with the percapita food requirement as prescribed by ICMR it was observed that 21 families, showed negative deviation for the intake of cereals: all the families showed negative deviation with respect to pulses and 77 families with respect to green leafy vegetables.

**Key Words:** *Food Channels, Food Security Frequency of Purchase of Food items*

### **INTRODUCTION**

The achievement of the goal of food security for all depends on three main factors, namely (1) food availability and stability of supplies (2) economic and social accessibility to food and (3) food intake and utilization (Kavishe, 1993).

Aliber and Modsole (2002) rightly stated that household food survey should remain the core of any future food security monitoring system.

At the household level, food security refers to the ability of the household to secure either from its own production or through purchases adequate food for meeting the dietary needs of all members of the household ([www.fao.org](http://www.fao.org)).

Sufficient food refers to both quantity and quality needed for good health. Increasing attention is made at the household and individual level because achieving food security at the global and national levels does not necessarily mean food availability and accessibility at the household level ([indepth@network.org](mailto:indepth@network.org)).

India is one of the few countries, which experimented with a broad spectrum of programmes for improving food security. It has already made substantial progress in terms of overcoming food insecurity by giving priority to self sufficiency in food grains and through procurement and public distribution of food grains, employment programmes etc. however despite a significant reduction in the incidence of poverty, chronic food insecurity persists in a large proportion of Indian population (Radhakrishnan and Reddy, 1997).

Food access of a locality with reference to the food requirement of the families residing there and food purchased through the various food channels will reveal the real picture of food security. This study is an attempt on this line.

### **MATERIALS AND METHODS**

This study was designed to

1. Study the socio economic background of the respondents

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2. Identify the channels of food procurement
3. Study the extent of utilization of these channels and
4. Study the food sufficiency of the households

### Area of the Study

The study was concentrated in one of the panchayats (Kalliyoor), which is one among the panchayats of Nemom block. This panchayat was purposively selected considering the acceptability and financial limitation of the study.

Selection of families – One hundred families were selected at random for this study

Tool – As many of the respondents were not thoroughly literate, an interview schedule was pre tested and used. The house wives were the main respondents.

## RESULTS AND DISCUSSION

### Personal Profile of the Respondents

Twenty two per cent of the women belonged to the age group between 25-34 years, 57 percent were in the age group between 35-44 years and 21 percent in the 45-55 years age group. Seventy three per cent of the women were married, 24% separated or divorced and 3 per cent were unmarried.

### Family Composition

Seventy five percent of the families were male headed households, while twenty five percent were female headed. Fifty nine families had 5-8 members while 15 per cent had just 2 members and 21 families had 3-4 members (Table-1). The total number of family members was 426; thus the average family composition works out to 2.

**Table 1: Details of family composition**

Total family strength	Details of family head		
	Male	Female	Total families
2	11	4	15
3-4	17	4	21
5-6	35	8	43
7-8	11	5	16
>8	1	4	5

### Occupational Status

All the families depended on wages from casual labour; however 23 families had Government jobs to supplement the family income, 2 families had members working in private firms, while 6 families had members with own enterprises like vegetable vending, tea shop, making bamboo products and binding. Thus the dependency ratio of the population works out to be 1:3.

**Table 2: Occupational status of the family**

Number of workers	Nature of work			
	Casual work	Government job	Private job	Own enterprise
1	62	23	1	1
2	32	-	-	4
>2	6	-	1	1

### Income and Expenditure Patterns

Seventy three percent of the families had a monthly income in the Rs. <5000, while the income of 17 families was in the range of Rs.5001-Rs.8000 and 10 percent of the families had an income in the range of rs.8000-10000 (Table 3).

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When the extent of indebtedness was studied it was observed that, all the families in the income range of Rs.0-5000/- were indebted in varying degrees; 10 percent to 40 percent of the monthly income was diverted to repayment. Sixty four percent of the families in the income range of Rs.5001-8000 were also indebted to various extents. Of these 30 percent families spent 30-40 percent of their income on repayments (Table-3).

With regard to savings, 69 percent the families in the income range Rs.>5000 had no savings in terms of money, however 34 percent of the families in the income range of Rs.5001-8000 saved up to 10 per cent of their income, 'chitties' were the main means of saving. Seventy percent of the families in the income range of Rs.5001-8000 were not able save their earnings.

**Table 3: Monthly income and expenditure pattern of the families**

Income range Rs.	Household expenditure			Indebtedness				Savings			
	90-100%	75-89%	50-74 %	Nil	10-20%	21-30%	31-40%	Nil	1-10%	11-20%	21-30%
>5000	63 (86.30)	7(9.50)	3(4.20)	-	59(80.82)	3(4.10)	11(15.06)	69(94.52)	-	2(2.80)	2(2.80)
5001-8000	7(41.10)	6(32.30)	4(23.60)	6(35.29)	1(5.88)	5(29.41)	5(29.41)	9(52.94)	6(34.00)	2(11.8)	-
8001-10000	1(10.00)	5(50.00)	4(40.00)	1(10.00)	2(20.00)	1(10.00)	7(70.00)	5(50.00)	2(20.00)	2(20.00)	1(11.00)

(Figures in parenthesis indicates percentage)

**Table 4: Possession of land and Vegetable cultivation**

Land holding	No :of families	Families involved in cultivation	
		Banana	Tapioca
0-3 cents	47	4	-
3.1-5 cents	39	1	2
5.1-10 cents	14	-	6

### Possession of Land and Vegetable Cultivation

Eighty six percent of the families possessed only upto 5 cents of land, while only 14 percent had above 5 cents of land. However, only 13 families had vegetable cultivation at least to a small extent. Banana was cultivated in less than 5 cents by 5 families, while tapioca was cultivated in less than 5 cents by 2 families and in an area between 3-5 cents by 2 families.

### Cattle Rearing

Cattle rearing towards milk production were assessed, twelve of the families possessed cattle, 10 of which were goat and 2 were cows. Three of the cows did not give any yield; here expenditure in the range of 300-400 was incurred for cattle feeds while 7 of the families obtained 1-2litre for household requirement; 2 families sold 250-500ml to other households.

### Poultry Rearing

Twenty six families undertook poultry rearing as a supplementary occupation, six families had one or two birds, 17 families had 3-4 birds, while 3 families had above 4 birds. Eggs were obtained for household

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level consumption on a daily basis in 8 families while in the others production was erratic. Eggs were not sold out in any of the families.

#### Food Purchase Pattern

The food security of a household is to a great extent assessed through the frequency in purchase of food items. Cereals were bought once in 2-3 days by 89 percent of the respondent families, 10 percent bought it even on a weekly basis, while 1 per cent bought it even on a daily basis.

Pulses were bought only by 27 families, that too on a monthly basis, Vegetables were bought once in 2-3 days by 73 percent, 12 families bought it on a weekly basis, 11 families bought it fortnightly and 4 families bought it on a daily basis. Roots and tubers were bought as a main item among vegetables fish was bought daily by 79 families. 13 families bought it once in 2-3 days and on a weekly basis by 8 families. Fruits were bought on a weekly basis by 59 families, this was mostly banana from the farm at Agricultural college; 67.7 per cent of them bought it only to sell it out to the local market; just 3 families bought items like oranges and grapes. Tea was the main beverage purchased it was purchased on a weekly basis by 77 families, once in 2-3 days by 12 families and fortnightly by 11 families.

Milk was purchased from the farm at Agricultural college by 81 percent of the families, 9 families obtained the milk requirements of the family from their own cattle, 4 families never brought milk at all and 6 families bought milk once in 2-3 days.

Oil was purchased on a weekly basis by 73 families, once in 2-3 days by 13 families, on a fortnightly basis by 9 families and 5 families on a monthly basis. Processed foods like pappads and pickles were bought on a fortnightly basis by 73 families, monthly basis by 16 families and once in 2-3 days by 11 families. Spices like chillies, chilly powder coriander etc. were bought on a monthly basis by 83 families, fortnightly by 11 families and once in 2-3 days by 6 families.

**Table 4: Frequency of purchase of food items**

Food stuff	Frequency					
	Daily	Once in 2-3 days	Weekly	Fortnightly	Monthly	Never
Cereals	1	89	10	-	-	-
Pulses	-	-	-	-	27	73
Vegetables	4	73	12	11	-	-
Fruits	-	-	59	-	-	41
Fish	79	13	8	-	-	-
Beverages	-	12	77	11	-	-
Milk and milk products	81	6	-	-	-	4
Fats and oils	-	13	73	9	5	-
Processed items	-	11	-	73	11	-
Spices	-	6	-	11	83	-
Sugar and joggerly	-	-	83	14	3	-

\*9 families did not have to buy milk

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### Monthly Food Expenditure Pattern

Monthly expenditure was seen to be the highest for cereals. In 62 families it was in the range of Rs.251-400. Amount spent on pulse was only below Rs.50/- in 27 families the rest did not purchase the item at all. Majority (66%) spent an amount between Rs.101 to 250 only. Even though the frequency of use of fish was high, the amount spent in 83 per cent of families was only between Rs.101 to 250. Expenditure on fruits was not satisfactory, 52 families spent only in the range of Rs.50-100/- 41 families never spent any amount on this food group. The expenditure on beverages mainly tea was comparatively high in the range of Rs.101/- to 250/- in 70 families. Although milk was an everyday ingredient of meals, majority of them spent only in the income range of Rs.50-100, similarly monthly expenditure on fats and oils, which is an inevitable ingredient in Keralite's cuisine, was observed to be below Rs.100/- in 70 per cent of the families.

Pappads were the main item of expenditure in the processed food group, majority (82 per cent) spent below Rs. 50/- on this group. The expenditure on spices were comparable to other sectors of population, it was in the range of Rs.50/- to 100/- in majority of the families (87%). Seventy one per cent of the families had members who ate breakfast and lunch from hotels, during days of work. The expenditure ranged from Rs.15-25 during lean periods, skipping a meal or two was reported in 36 families.

**Table 5: Monthly food expenditure pattern of the families**

Food stuff	Expenditure range				
	Rs.<50	Rs.51-100	Rs. 101-250	Rs. 251-400	Nil
Cereals	-	18	20	62	-
Pulses	27	-	-	-	73
Vegetables	-	25	66	9	-
Fruits	7	52	-	-	41
Fish	6	11	83	-	-
Beverages	-	22	70	8	-
Milk and milk products	-	72	19	-	-
Fats and oils	21	49	12	18	-
Processed items	82	16	2	-	-
Spices	87	13	-	-	-
Sugar and jaggery	11	84	5	-	-

### Channels of Food Purchase

The main channels of purchase of various food groups were studied. The retail shops were mainly depended upon for the purchase of cereals. There is one outlet of the PDS in this locality. However most of the respondents were not keen on purchasing low quality products from them in 92 percent of the cases. Cereals (rice and wheat) were bought from retail shops; of them 80 per cent were very conscious of purchasing branded products. Similarly only six per cent brought sugar from PDS.

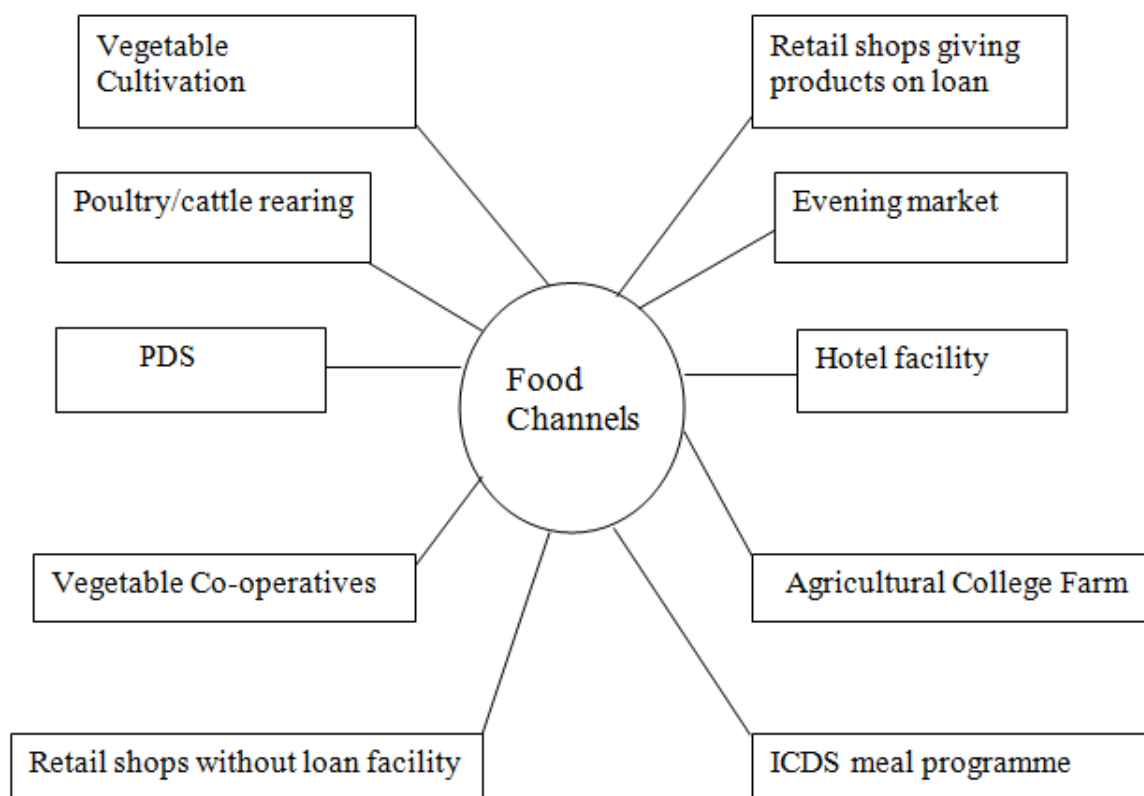
Pulses, spices, jaggery, processed items, fats and oils were totally bought from retail shops. The practice of buying products in advance and later payment was the common practice.

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The perishables like fish and vegetables were bought from the evening market of the locality. There were 2 vegetable cooperatives in this area. However this facility was under utilized by these families.

The Agricultural college farm catered to the milk requirements of 61 per cent of the group, this could be due to their waged labour in the college itself. Similarly 59% of the group depended on the farm for the fruit requirements.

Free mid day meals caters to the need of preschool children of rural areas. Twenty one families were beneficiaries of the ICDS mid day meal programme.



**Rank wise classification of channels of food supply in Kalliyoor Panchayat**

One child each from 5 families, 2 children from 8 families was beneficiaries of this programme. Cereals were served for 300 days a year at the rate of 50 grams per person.

### ***Evaluation of the Daily Consumption of Food in the Families***

When the per capita intake of food was compared with the per capita food requirement as prescribed by ICMR, it was observed that, 27 families showed negative balance in cereal intake. All the families were deviating in the requirement of pulses, fruits, milk and eggs. Seventy eight percent of the group was far below the requirement of green leafy vegetables. Similarly 71 families showed negative deviation in the intake of fats and oils and only 65 per cent of the families had sufficient intake of other vegetables.

A salient finding of this study was that in the families that depended on wages, the food intake was sufficient only during the days of work. There was no provision made for lean periods. They depended on closely branded cereals during this time and saved or borrowed to buy for the rest of the days.

Nutrition education to promote purchase and utilization of locally available nutritious food stuffs is the urgent need of the hour. The gearing of the public distribution system is to be emphasized with supply of good quality products. People are to be convinced of the need for kitchen gardening, poultry and cattle rearing to cater to the family's food requirements along with it becoming a subsidiary occupation.

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**Table 6: Evaluation of daily consumption of food based on ACU**

Food stiffs	Per capita (range) gm	RDA	
		Positive	Deviation from RDA Negative
Cereals	250-350	50	6
	351-450	13	10
	451-500	10	1
Pulses	<50	-	28
	51-60	-	39
	>60	-	33
Green leafy vegetables	<100	9	33
	101-150	8	41
	>150	5	4
Fruits	50-100	-	36
	101-200	-	64
Milk	201-300	-	47
	300-500	-	53
Fats and oils	<50	-	62
	51-100	21	17
Fish	30-50	68	32
Egg	30-50	-	100
Sugar and Jaggery	<30	70	1
	>30	19	10

Co-operative vegetable production and marketing needs to be intensified in these areas. Women could take up community kitchen as a subsidiary occupation and thus fulfill the food requirements of the community at low cost.

**REFERENCES**

- Aliber, Michael and Salome Modsde (2002).** Pilot study on methods to monitor household level food security for National development of Agriculture Human Sciences research council South Africa, Indepth @indepth.network.org. Indepth resource development for demographic surveillance systems Ghana.
- FAO (2012).** Household food security and Community nutrition. Nutrition and consumer production [www.fao.org/ag/AGN/nutrition](http://www.fao.org/ag/AGN/nutrition).
- Kavishe PF (1993).** Food security. Monograph series, ACC/SCN and Tanzanian food and nutrition centre. Nutrition relevant actions in Tanzania.
- Radhakrishnan R and Reddy V (1997).** Food security and nutrition vision 2020. [www.Planningcommission.nic.in/reports/gen.rep](http://www.Planningcommission.nic.in/reports/gen.rep).