POPULATION AND LEVEL OF NUTRITION – A STUDY IN REFERENCE TO MURSHIDABAD DISTRICT, WB

Md Hasan Ali[1] and Sanjay Kr. Jha[2]

INTRODUCTION :

The dictionary meaning of the word "nutrition" is the act or process of nourishing or being nourished (W.S.N.C.D). In examining food requirement of population not only the production of cereals, pulses, vegetables, meat, fish, etc. is examined but it becomes essential to know the per capita consumption of calories, proteins and vitamins for estimating the level of nutrition. Our diet consists of a number of food materials which are injected and converted for use in the body for maintaining a sound health. Nutrition is the end of the process by which these are assimilated and produce the desire result (Borker,

ABSTRACT

The field of geography is primarily concerned with the study of land and man. Nutrition is one of the important aspect of a region. Agricultural development helped in augmenting per capita calorie and protein production. Wheat and rice output was the major contributor for this increase in calorie and protein production. The contribution of coarse grains in augmenting calorie and protein production was very marginal in spite of the introduction of improved strains. Per capita calorie and protein production through pulses declined. Because of the heavy tilt in cereal production, the relative prices of pulses have gone up tremendously. The impact of price rises on the consumption of pulses by the poor, which is already low. The impact of new technology introduced for finer grains had a negative impact on coarse-grain production. This unhealthy trend is likely to affect the poor in semi-arid areas where these crops are largely grown. Surplus and deficit S.N.U are the main theme to calculate of a one region for development.

KEYWORDS: *Nutrition, Surplus and Deficit S.N.U, Calories, Average Yield.*

SHORT PROFILE

Md Hasan Ali is a Research Scholar at Department of Geography in University T.M.B.U.

1957).
The main objective of the nutritional science is to assess the existence and extent of dietary deficiencies and to plan the supply of nutritious diet to the people in order to combat the problem of mal-nutrition and under nutrition. High nutritional level of a country or community enables the people to participate fully in the execution and progress of all national development plans (Sengupta, 1976).
The level of nutrition is an important measurement of land use efficiency in an agricultural region like Murshidabad district. The present study is an attempt to measure food production in terms of calorie value and to estimate the

[1]**Research Scholar, Univ. Dept. of Geography, T.M.B.U.**
[2]**Associate Professor, Sabour College, T.M.B.U.**

energy deficiencies and food demand of the growing population. The assessment of nutritional problem arising out of the inadequate food supply has been done with the help of careful estimation of food crop production and through a well - planned food consumption survey in some selected blocks of Murshidabad district.

METHODS USED IN NUTRITIONAL ASSESSMENT:

Several methods of investigation may be used in the assessment of nutritional level of population and for revealing the existence of mal-nutrition (Sengupta, 1976). There are four important measurement :

(A) ANTHROPOMETRIC MEASUREMENTS :

The pattern of growth of a child particularly height and weight are strongly influenced by nutrition. So, since a long time anthropometric measurement of height and weight corresponding to age, chest and hip measurement and the thickness of skin etc. are being extensively used in determining nutritional status. These measurements of population are often compared to the standard measurements or national norm which may vary from country to country.

(B) CLINICAL ASSESSMENT :

Clinical signs of nutrition deficiency diseases in relation to their food consumption are the corner stone of all the nutritional survey. Medical examination of eyes, skin, lips, tongues, thyroid gland, hair etc. are taken up to assess the extent of mal-nutrition. But since this method has several limitations, it is reliable only when carried out conjointly with food consumption survey.

(C) BIOCHEMICAL ASSESSMENT :

This involves the examination of blood plasma for several nutrients such as protein, vitamin A carotene, ascorbic acid and alkaline phosphate etc. This technique is used mostly in individual cases where facilities of well-established laboratories are available.

(D) FOOD CONSUMPTION SURVEY :

The purpose of food consumption survey is to assess the existence of hunger or mal-nutrition in a particular region. This type of survey determines what and how much the people eat and why, what they ought to eat to be healthy, and how much calories, protein and other essential nutrients are furnished by the diets to meet their physiological requirements. This method demonstrates the existence and extent of mal-nutrition or nutritional deficiency in a socio-economic group or in aregion or in a country. For making such assessments a number of variables such as age, sex, weight, physical activity and environmental conditions have to be considered.

METHODOLOGY ADOPTED :

The present study tries to measure the level of nutrition in Murshidabad district. For this purpose the average yield of various food crops has been estimated in different blocks on the sample survey of villages and field study.Thus the total production of food crops has been calculated. In the second step availability of cereals for human consumption has been determined after deducting the amount used for seed, wastage and export. Since the accuracy of the method depends on the accuracy of statistics of production, utilization, imports and exports, several checks of it in the different parts of all the blocks have been made. Availability of calories from all sources enables us to demarcate the areas of surplus and deficit calories.Based upon the calorie intake for the whole year and the required calories for maintaining sound health

(balanced diet), the standard nutrition unit for the areas has been determined. The areas of surplus and deficit standard deficit unit have close relation with the efficiency of land use and hence correlation between total sown area and S.N.U has been established. The nutritional level of sample villages has been measured on the basis of actual data collected from these villages in course of field work. These sample surveys portray a true picture of regional imbalance in food supply and nutritional deficiency.

CROP PRODUCTION AND AVERAGE YIELD :

The regional differences in the cropping pattern are well revealed through the study of crop combination of Murshidabad district. It has come out from the study that Agahani and Rabi crops occupy the same place in the crop structure of the blocks and in every blocks food grains occupied dominating position among the various raised. The farmers in the villages do not make much distinction between food and cash crop and to some extent the food crops are also regarded as low value cash crops.

"Food crop production is a very important topological characteristics of agriculture. It reflects the inclination of a particular village to produce specific agricultural goods" (Kostrowichi, 1972).In the present study the average yield of food grains has been determined by the detailed survey in different areas of Murshidabad district. The average per acre yield has been multillied by the gross sown area under the particular crop. Thus the figures obtained give the average production of food grains in the district.

Table- 1   Food Crops Production and Yeild in Murshidabad District (2011-12)

Name Of Blocks	Total Population 2011	Total Area Under Food Crops in hectare	Average Production Per hectare in Quintal	Total Production in Quintal	Production Per Capita Per Annum in Quintal	Production Per Capita Per Day in Grams	Calories produced per Capita From Food Crops
Berhampore	450293	24180	31.11	752240	6.84	1873.97	2339.75
Beldanga-I	319541	13416	39.35	527919	7.91	2167.12	3026.02
Beldanga-Il	250240	13720	37.78	518341	7.54	2065.73	1687.66
Nowda	226747	20000	31.04	620800	5.24	1435.61	2675.33
Hariharpara	257245	18224	24.15	440109	5.54	1517.80	3442.46
Kandi	220033	17800	24.71	439838	5.34	1463.01	3797.25
Khargram	272868	24000	22.36	536640	4.48	1227.39	2982.17
Burwan	257354	18200	28.78	523796	5.66	1550.68	3254.45
Bharatpur-I	172912	13240	25.06	331794	4.80	1315.06	2741.45
Bharatpur-Il	176267	11890	24.35	289521	5.00	1369.86	3698.84
Farakka	254796	4360	30.36	132369	6.65	1821.91	3578.32
Samserganj	284019	4000	19.39	77560	5.69	1558.90	2499.98
Suti-I	179982	7010	29.02	203430	6.07	1663.01	2878.65
Suti-Il	278111	6135	30.12	184786	5.78	1583.56	3467.65
Raghunathganj-I	196211	9000	33.20	298800	4.61	1263.01	3365.98

Raghunathganj-Il	263375	4000	35.47	141880	4.98	1364.38	3545.65
Sagardighi	310495	23000	39.18	901140	5.55	1520.54	3655.68
Lalgola	335448	12135	24.13	292817	4.81	1317.80	2975.55
Bhagwangola-I	201995	10000	17.98	179800	4.80	1315.06	2585.64
Bhagwangola-Il	158005	12000	18.62	223440	5.12	1402.73	3255.54
Msd-Jiaganj	231718	14550	26.91	391540	6.03	1652.05	3065.24
Nabagram	227469	23500	20.15	473525	4.42	1210.95	3187.36
Domkal	362821	22500	12.42	279450	4.31	1180.82	3254.65
Jalangi	252448	16170	33.37	539592	4.90	1342.46	3154.21
Raninagar-I	188997	10500	21.22	222810	4.78	1309.58	2836.54
Raninagar-Il	190396	11470	22.59	259107	5.32	1457.53	2846.58
Murshidabad	7103807	370000	27.03	12353044	5.47	1498.10	3069.17

Source : Computed by Author

Table No – 01 evaluates gross production and per hectare output of food grains in different blocks in Murshidabad district during 2011-12. The study of the said Table reveals that there is great variation in the total production of food grains. Bigger blocks with high percentage of cropped area under food crops are produced more calories than the smaller ones. The production of food crops in a block reflects that there is an apparent relationship between crop production facilities available for cultivation such as irrigation etc. in that area. The average production of food grains of Murshidabad is 27.03 quintals per hectare but it varies from block to block between 12.42 – 39.18 quintals. Sagardighi has the highest per hectare production of 39.18 quintals followed by Berhampore, Beldanga-l, Beldanga-ll, Nowda, Farakka, Suti-ll, Raghunathganj-l, Raghunathganj-ll and Jalangi block which have more than 30 quintals food grain production per hectare. Bharatpur-l, Suti-l and Msd-Jiaganj fall in the second category producing 25-30 quintals per hectare. Other blocks may be placed in third category which produces less than 25 quintals food grains per hectare.
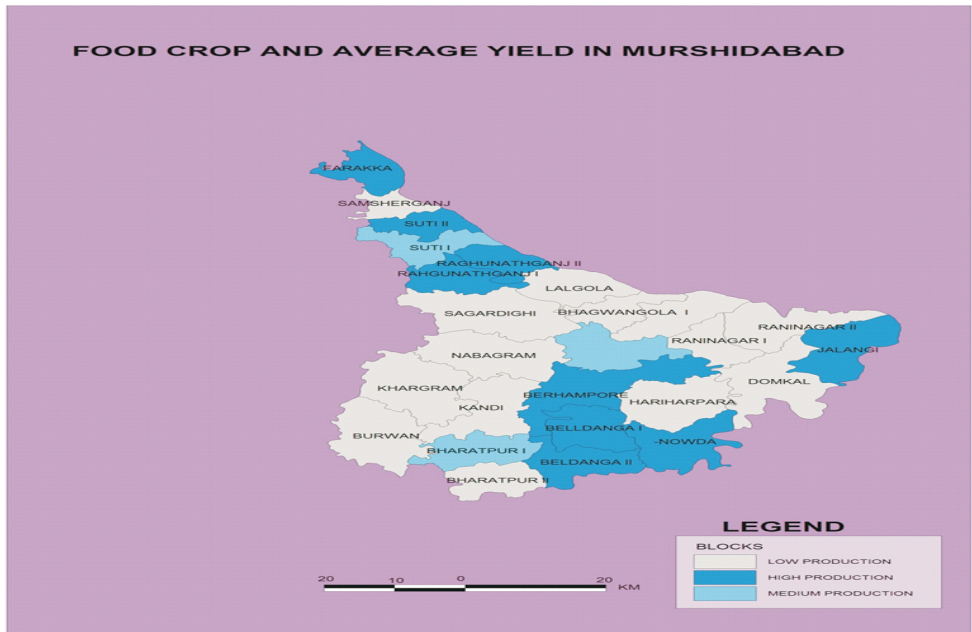
Figure – 1 Food crops and average yield in Murshidabad District. Prepared by Author in MapInfo Software

Per capita daily production of food grains enable us to measure availability of cereals, pulses, milk, meat etc. which is varying
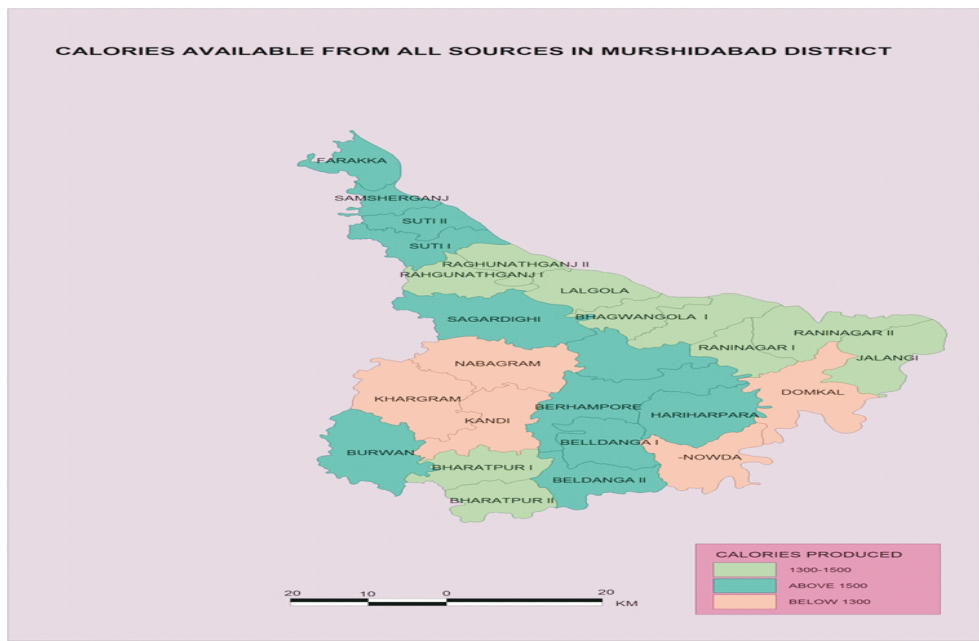

Figure – 2 Calories produced from all sources in Murshidabad. Author prepared by MapInfo software

SURPLUS AND DEFICIT S.N.U :

Availability of calories per capita per day

enables us to estimate surplus or deficit amount of calories available to the population in the study area. It has been estimated that in India per capita daily intake of about 2000 calories available from 580 grams of food materials should be taken as adequate and reasonable minimum requirement (Sharma, 1977). Out of 580 grams of food stuff approximately 450 grams are obtained from cereals and remaining 130 grams from pulses, oil, vegetables and also from animal products etc. Thus there are two yard sticks to measure surplus and deficit availability of calories. The cereal supply should not be less than 450 grams per capita per day or the calories available from all sources should be at least 2000 per capita per day. The figure – 3 reveal the status of different blocks in respect to surplus or deficit calories. This district as a whole is surplus in the availability of cereals and in calories also. The area is rural and its agriculture dominated economy makes it to depend primarily on cereals for calories supply. All the blocks are surplus in cereal supply except the urban centre of the district which has deficit of about 115.75 grams or 25.72 percent of required amount. Farakka, Suti-l, Suti-ll, Nabagram, Beldanga-l, beldanga-ll, Nowda, Jalangi, Raninagar-l, and Raninagar-ll have above surplus availability of cereals by over 150 percent whereas Sagardighi, Lalgola, Bhagwangola-l,Bhagwangola-ll, Domkal, Hariharpara, Bharatpur-l, Bharatpur-ll, Burwan and Khargram block have 100-150 percent surplus cereals. Rest of the blocks the surplus in cereals below 100 percent
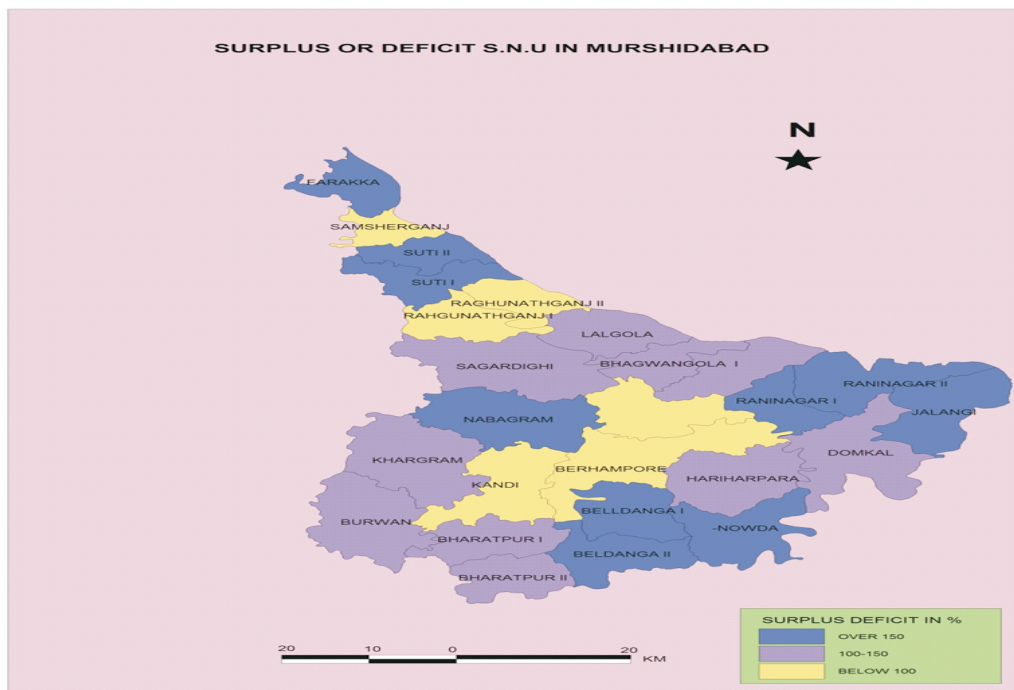

Figure – 3 Surplus or deficit S.N.U in Murshidabad District. Author prepared map by using MapInfo Software.

CONCLUSION:

As per the information of Murshidabad district population and level of nutrition, we are concluded that the district is highly populated on the other hand the level of nutrition is not proportionate to that population. Nutrition from all sources are very low as they bear a mass of population. If carrying capacity of land will be enlarged by modern techniques, the

district will recover such problems as well as it will be developed district in west Bengal as well as in India.

REFERENCES :

1. Wooldridge and East, (1970) : "The Sprit and Purpose of Geography", Hutchinson Univ., Library, London, P.25.
2. Stamp, L.D. (1960) : "Our Developing World, Faber and Faber, London, P.13.
3. Shafi, M. (1969) : "Can India Support Five Times Her Population", Science Today, May, PP. 22-23.
4. Sengupta, P.N., (1976) : "Importance of Food Consumption Surveys in Assessment of Mal-nutrition, in Science and Integrated Rural Development", Indian Science Congress Association Pub. Kolkata, P.86.
5. Shafi, M., (1960) : "Land Utilization to Eastern Uttar Pradesh" Aligarh Muslim University, P.222.
6. Singh, G.P., (1983) : "Land Utilization and Level of Nutrition In Nawada District of Bihar", Magadh University, Budh Gaya.
7. Borker, C. (1957) : Health in Independent India, Ministry of Health, New Delhi, P.26.

Md Hasan Ali
Research Scholar, Univ. Dept. of Geography, T.M.B.U.