# Population and Level of Nutrition of Murshidabad District, West Bengal

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**ABSTRACT:**

The fundamental problem which faces the world today is rapidly increasing pressure of population on land resources. On the one hand, the land surface is fixed and inextensible but on the other human population continues to expand. This leads to intensive use of available land resources by the inhabitants. In the country side of Murshidabad district one can very well observed on intimate relationship between the farm and the farmer. In the present research, we are tried to measure the pressure of population on land resources and to judge the nutritional level of population in the area. Land exerts direct influences on man but at same time man's uses of land has carved out the cultural landscape. Through the ages; the inter relationship between land and man has been responsible for the evolution of culture, history and society.

**KEYWORDS:** Population, Pressure, Landuse, Nutrition, NSA, GSA

## INTRODUCTION:

Pressure of population displays the relationship between man and resources in any area. Population pressure upon limited resources has always been associated with disastrous effect both for human being and resources. Various factors such as soil erosion, loss of soil fertility, water population, degradation of natural vegetation, degeneration of human settlements; brake up of farming systems, decline in health conditions, food shortage, unemployment and under – employment and general social equilibrium (Browing) have/ had devastating consequences upon man's prosperity. The occurrence of above – noted phenomena have been forced people to change traditional methods of livelihood towards

better land use practices. Population pressure leads to economic improvement without which human society would remain culturally and economically stagnant (Das, 1981).

Classical literature on the subject, Population Pressure on Land Resources includes the works of Malthus (1978), Geertz (1963) and Boserup (1949, 1965). Malthus out his theory that population always increases upto the limits of the means of sustenance and is only checked by war, famine and pestilence.

Geertz tried to draw a contrast between fragile Sweden and flexible wet rice ecosystem, which shows how labour intensification in Sweden system is unrewarding and quickly leads to a decline of marginal returns below zero because the essential environment of the system has been destroyed through excessive utilization. The wet rice ecosystem on the other hand is characterized by an extraordinary elasticity in response to additional inputs of labour and skill.

Boserup's theory of agricultural change under population pressure is compatible with neither the views of Malthus nor those of Geertz. Boserup contradicted neither the Malthusian nor those of Geertz. Boserup contradicted the Malthusian argument by proposing that adoption of successively more intensive technologies of production flows automatically from the onset of population pressure on land at any given lower level of intensity and thus relieves pressure.

Briefly, then, it could be argued that any given area with a given land resource endowment can be hierarchically considered to have an agricultural ecosystem. The hierarchy can be ranked according to the complexity of skill and technology involved form the lowest to the highest and population will adopt the system offering the highest returns for their inputs in consistent with the principle of least efforts. Since a shift to a higher technology demands additional effort and reorganization in order to fit more inputs into the system of contact land (Brokfield, 1971). Thus the threats of an increasing population within a limited land area with force agrarian communities to adopt more intensive technology to enable the land to satisfy the needs of an expanding population.

**AIM AND OBJECTIVES**:

The present research work is to analyze the population pressure on landuse of Murshidabad district. The present study has the following objectives:

1. To study the pressure of population on landuse of Murshidabad district.
2. To analyze the level of nutrition throughout the district
3. To correlate the NSA and GSA

## LOCATION AND EXTENT OF THE STUDY AREA:

Geographically Murshidabad District is located between $23^0$43'30" and $24^0$50'20" north latitude and $87^0$4917' and $88^0$46' east longitude. It is the northern most segment of lower Gangetic plain. The district Murshidabad is bounded by Malda district in north by Jharkhand state boundary and Birbhum district in west, Burdhaman and Nadia districts in the south and India – Bangladesh international boundary in the east. The Bhagirathi River passes through the middle of the district from north to south. This district is divided into two parts by the river Bhagirathi. The western part having stiff clay soil, reddish in colour and undulated topography is called 'Rarh' and simultaneously the eastern part of the Bhagirathi containing alluvial and fertile soil is known as "Bagri." The district extending over an area of 5324 $km^2$ and the land holding is only 0.61 hectare per persons and having a population of 7103,807 containing 3627,564 male and 34,76,243 female. 1334 person/sq.km is the population density of this district according to census 2011. Murshidabad is the $5^{th}$ populated district in West Bengal.

## SOURCE OF DATA AND METHOLOGY:

The source material of this research paper is based on secondary sources. The Major sources of data are collected through Census of India, District Land Use Office, District Gazetteers (Murshidabad district), District Statistical Handbook, Topographical maps (Survey of India), District Planning Series Maps (NATMO), Google Earth Imageries, Govt. of West Bengal and various government departmental documents, books, journals, conference papers; official websites etc.

The data has been analyzed both in ***qualitatively*** and ***quantitatively***. Various parameters correlates to analyze critically with suitable statistical techniques. The above quantitative analysis has been pictured to solve with the help of various software like MapInfo, ArcGIS, and Google Earth Pro.

## MAN - LAND RATIO:

The pressure of population on land resources can be explained in a number of ways. For example, if we consider the simple land – man ratio, it is crude or arithmetic density of population, which we have already examined in the preceding chapter. Similarly, the pressure of population on agricultural land, or on land growing food crops etc. can also be considered.

Since both the variable, land and man are of varying quality, various forms of their relationship may be examined such as rural density (rural land divided by rural area), agricultural density (agricultural land divided by agricultural population), physiological density, nutritional density and caloric density. All these forms of densities show simple man – land ratios. Without any repetition of them it has been tried to measure statistically the inter– relationship of land use and population in a number of ways in the pages that follow.

## CORRELATION BETWEEN GROSS SOWN AREA (G.S.A.) AND POPULATION DENSITY:

In an area of predominantly agricultural economy, without shortage of non-farm activities, the congregation of human mass is the function of the quantum of arable land as well as the productivity of soil. There is, however, no precise method to quantity the qualitative aspect of soil. One can, therefore, depend upon the total area producing crops, to evaluate the burden of rural population, which subsists on agricultural pursuits with existing technology. It is as fact that some of the area is sown more than once, so an attempt has been made to correlate the population as dependent variable (Y) with the total cropped area (G.S.A.) as an independent variable (X). Correlation between these two variables has been computed by the Pearson's method of deriving correlation co-efficient with the following formula:

$$Y = \frac{N\sum XY - (x)\ (y)}{N X^2 - (X)^2\ Ny^2 - (y)^2}$$

Where Y = Product moment co-efficient correlation

N = Number of data

X = G.S.A.

y = Population Density.

The correlation co-efficient of population density and total cropped area in Murshidabad district comes to which is high and positive. This shows that in Murshidabad the population is very much dependent upon total area under crops.

It can therefore, be easily concluded that the distribution of population can only be explained by the land under cultivation. For bearing the burden of further addition of human heads, either the intensity of cultivation is to be increased or the productive capacity of agricultural land has to be advanced.

**CORRELATION BETWEEN NUTRITIONAL DENSITY AND GENERAL DENSITY:**

In the present study, the carrying capacity of the land in Murshidabad district has been determined in four ways: persons per hectare, per capital net sown area, per person total cropped area and person's hectare of food crops.

**Table – 1 Land-Man Relationship in Murshidabad District (2011)**

| S No | Name of District | Total Population (2011) | N.S.A. | Per capita N.S.A. | G.S.A. | Per Person cropped area | Area under Food crops | Per person food cropped area | Persons per Hectare of Food crops area |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Berhampore | 642110 | 24180 | 0.04 | 55287 | 0.09 | 49163 | 0.08 | 13.06 |
| 2 | Beldanga-I | 348527 | 13416 | 0.04 | 24414 | 0.07 | 20115 | 0.06 | 17.33 |
| 3 | Beldanga-II | 250458 | 13720 | 0.05 | 2990 | 0.13 | 30867 | 0.12 | 8.11 |
| 4 | Nowda | 226859 | 20000 | 0.9 | 39651 | 0.17 | 35816 | 0.15 | 6.33 |
| 5 | Hariharpara | 257571 | 18224 | 0.07 | 44616 | 0.17 | 40306 | 0.15 | 6.39 |
| 6 | Kandi | 275777 | 17800 | 0.06 | 31209 | 0.11 | 30079 | 0.11 | 9.17 |
| 7 | Khargram | 273332 | 240000 | 0.09 | 40246 | 0.15 | 32111 | 0.12 | 8.51 |
| 8 | Burwan | 257466 | 18200 | 0.07 | 29804 | 0.12 | 28404 | 0.11 | 9.06 |
| 9 | Bharatpur-I | 172702 | 13240 | 0.08 | 16714 | 0.1 | 15855 | 0.09 | 10.89 |
| 10 | Bharatpur-II | 176368 | 11890 | 0.07 | 17809 | 0.1 | 14778 | 0.08 | 11.93 |
| 11 | Farakka | 274111 | 4360 | 0.02 | 7852 | 0.03 | 7618 | 0.02 | 35.98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | Samserganj | 379778 | 9000 | 0.02 | 4015 | 0.01 | 3774 | 0.01 | 11.95 |
| 13 | Suti-I | 179908 | 7010 | 0.04 | 13817 | 0.08 | 12903 | 0.07 | 13.94 |
| 14 | Suti-II | 278922 | 6135 | 0.02 | 11110 | 0.04 | 10695 | 0.03 | 26.08 |
| 15 | Raghunathganj-I | 283792 | 9000 | 0.03 | 18110 | 0.06 | 17769 | 0.06 | 15.97 |
| 16 | Raghunathganj-II | 265336 | 4000 | 0.02 | 5010 | 0.01 | 4622 | 0.01 | 57.41 |
| 17 | Sagardighi | 310461 | 23000 | 0.07 | 41013 | 0.13 | 40184 | 0.12 | 7.73 |
| 18 | Lalgola | 335831 | 12135 | 0.04 | 25387 | 0.08 | 20878 | 0.06 | 16.09 |
| 19 | Bhagwangola-I | 20271 | 10000 | 0.05 | 19630 | 0.1 | 18884 | 0.09 | 1.07 |
| 20 | Bhagwangola-II | 158024 | 12000 | 0.08 | 17495 | 0.11 | 16749 | 0.1 | 9.43 |
| 21 | MSD-Jiaganj | 330374 | 14550 | 0.04 | 32800 | 0.1 | 31777 | 0.09 | 10.4 |
| 22 | Nabagram | 227586 | 23500 | 0.1 | 39226 | 0.17 | 38556 | 0.17 | 5.9 |
| 23 | Domkal | 363976 | 22500 | 0.06 | 64101 | 0.18 | 63126 | 0.17 | 5.77 |
| 24 | Jalangi | 252477 | 16170 | 0.06 | 30850 | 0.12 | 30108 | 0.12 | 8.39 |
| 25 | Raninagar-I | 189105 | 10500 | 0.06 | 24259 | 0.13 | 23508 | 0.12 | 8.04 |
| 26 | Raninagar-II | 190885 | 11470 | 0.06 | 32852 | 0.17 | 32163 | 0.17 | 5.93 |
| | Murshidabad District | 7103805 | 37000 | 0.05 | 720267 | 0.1 | 710438 | 0.1 | 10 |

*Source: Computed by the author*

**PER PERSONS NET SOWN AREA:**

It is well evident that arable lands alone are capable of maintaining population has been established. Blocks like Bhagwangola-II, Nabagram, Khargram, Bharatpur-I and Nowda blocks have higher density of population. In these areas per capita net sown area is just above 0.08 hectare. Population pressure is growing but there is little expansion in agricultural land and hence per person net sown area is small. Suti-I, Lalgola, Sagardighi, Bhagwangola-I, MSD-Jiaganj, Raninagar I & II, Jalangi, Domkal, Hariharpara, Berhampore, Kandi Beldanga-I & II, Burwan and Bharatpur-II blocks have lower per capita net sown area (0.04-0.08). Rest of the district has lowest per capita Net Sown Area (less than 0.04 hectare).

**PER PERSONS CROPPED AREA:**

Since the pressure of population is related to total cropped area which includes N.S.A. and land sown more than once the relationship between crop land and population has been established. Nabagram, Hariharpara, Domkal and Raninagar-II blocks have the highest per persons cropped area (over 0.15 hectares) and show greater carrying capacity of land.

Blocks like Burwan, Khargram, Kandi, Bharatpur I & II, Beldanga-II, MSD-Jiaganj, Jalangi, Raninagar-I, Sagardighi, Bhagwangola I & II category where per person cropped area falls between 0.10 to 0.15 hectares. Suti-I, Raghunathganj-I, Lalgola Berhampore along with Beldanga-I blocks third rank where 0.06 to 0.09 hectare of cropped area is shared by person. Rest of blocks have less than 0.06 hectare per persons cropped area. High population density and smaller area of the blocks account for lower per capita cropped land. Since the area under crops like sugarcane, oilseeds etc. do not produce caloric directly for human consumption. It is therefore concluded that even the consideration of total cropped area does not present a correct picture of carrying capacity of the land. So, only area under food crops should be considered.

**PER CAPITA AREA UNDER FOOD CROP:**

The pressure of population is also related to per capita area under food crops. Nabagram Raninagar-II and Domkal blocks have the highest per person food crop area (over 0.15 hectare). Sagardighi, Raninagar-I, Jalangi, Burwan, Khargram, Kandi, Hariharpara and Beldanga-II blocks fall in the second category where per person good cropped area is 0.11 – 0.15 hectare. Suti-I, Raghunathganj-I, Lalgola, Bhagwangola I & II MSD-Jiaganj, Berhampore, Beldanga-I, Bharatpur-I and II blocks occupy third rank where 0.06 to 0.10 hectare of food crop area is shared by a person. Rest of blocks have less than 0.06 hectare per person.

**PERSONS PER HECTARE OF FOOD CROPS:**

For the purpose of measuring total caloric production in relation of the total population only area covered by food crops have been taken into account. Persons/ hectare of food crop testify the carrying capacity of land in real sense. If the per capita land under food crops is higher, the area must be in a position to support more population.

The account of 10 persons/ hectare of food crops which is also known as caloric density of population. Highest caloric density is recorded by Raghunathganj-II which has 57.41 persons/ hectare of food crops in 2011 follow closely with Farakka (35.98) and Suti-II (26.08) persons/hectare of food crop. Beldanga-I, Burwan, Bharatpur-I, Suti-I, Raghunathganj-I, Lalgola and MSD-Jiaganj blocks have moderate caloric density (10-12

persons), whereas rest of the blocks have low density (below 10). It is because these blocks have large single cropped areas and lower number of population. Hence pressure of population on food producing areas is not much.

## POPULATION AND LEVEL OF NUTRITION:

The main objective of the nutritional science is to assess the existence and extent of dietary deficiencies and to plan the supply of nutrition diet to the people in order to combat the problem of malnutrition 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. The present study is an attempt to measure food production in terms of caloric value and to estimate the 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 help of careful estimation of food crop production and through a well-planned food consumption survey in some selected villages of Murshidabad district.

## CROP PRODUCTION AND AVERAGE YIELD:

The regional differences in the cropping pattern are well revealed through the study of crop combination of the 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 block 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 characteristic of agriculture. It reflects the inclination of particular village to produce specific agricultural goods” (Kostrowichi, 1972). In the present study the overage yield of food grains has been determined by the detailed survey in different areas of blocks. The average per acre yield

has been multiplied by the gross sown area under the particular crop. Thus the figures obtained give the average production of food grains in that block.

**Table – 2 Food Crop production and Average yield in Murshidabad district (2011-12)**

| S. No | Name of Blocks | Total Population | Total Area under Food crops (in hectare) | Average production per hect. (in quintal | Total production (in Quintal) | Production per capita per annum (in quintal) | Production per capita per day (in gross) | Caloric produced per capita from food crops |
|---|---|---|---|---|---|---|---|---|
| 1 | Berhampore | 642110 | 49163 | 23.13 | 1137140 | 1.77 | 484.93 | 1697.25 |
| 2 | Beldanga-I | 348527 | 20115 | 24.26 | 487990 | 1.4 | 383.56 | 1342.46 |
| 3 | Beldanga-II | 250458 | 30867 | 29.41 | 907798 | 3.62 | 991.78 | 3471.23 |
| 4 | Nowda | 226859 | 35816 | 28.58 | 1023621 | 4.51 | 1235.62 | 4324.67 |
| 5 | Hariharpara | 257571 | 40306 | 29.72 | 1197894 | 4.65 | 1273.97 | 4458.89 |
| 6 | Kandi | 275777 | 30079 | 27.34 | 822359 | 2.98 | 816.44 | 2857.54 |
| 7 | Khargram | 273332 | 32111 | 26.33 | 845483 | 3.09 | 846.58 | 2963.03 |
| 8 | Burwan | 277466 | 28404 | 25.43 | 722314 | 2.6 | 712.33 | 2493.15 |
| 9 | Bharatpur-I | 172702 | 15855 | 25.91 | 410803 | 2.38 | 652.05 | 2282.17 |
| 10 | Bharatpur-II | 176368 | 14778 | 24.64 | 364129 | 2.06 | 564.38 | 1975.33 |
| 11 | Farakka | 274118 | 7618 | 26.73 | 203629 | 0.74 | 202.79 | 709.59 |
| 12 | Samserganj | 379778 | 3774 | 25.21 | 95143 | 0.25 | 68.49 | 239.71 |
| 13 | Suti-I | 179908 | 12903 | 23.41 | 302059 | 1.68 | 460.27 | 1610.94 |
| 14 | Suti-II | 278922 | 10695 | 24.91 | 266412 | 0.96 | 263.01 | 920.53 |
| 15 | Raghunathganj-I | 283792 | 17769 | 23.94 | 425390 | 1.5 | 410.96 | 1438.36 |
| 16 | Raghunathganj-II | 265336 | 4622 | 22.72 | 105012 | 0.4 | 109.59 | 383.56 |
| 17 | Sagardighi | 310461 | 40184 | 29.46 | 1183821 | 3.81 | 1043.84 | 3653.44 |
| 18 | Lalgola | 335831 | 20878 | 25.12 | 524455 | 1.56 | 427.4 | 1495.9 |
| 19 | Bhagwangola-I | 202071 | 18884 | 28.97 | 547069 | 2.71 | 742.47 | 2598.64 |
| 20 | Bhagwangola-II | 158024 | 16749 | 24.04 | 402646 | 2.55 | 698.63 | 2445.2 |
| 21 | MSD-Jiaganj | 330374 | 31777 | 22.96 | 729600 | 2.2 | 602.74 | 2109.59 |
| 22 | Nabagram | 227586 | 38556 | 28.09 | 10883038 | 4.76 | 1304.11 | 4564.38 |
| 23 | Domkal | 363976 | 63126 | 24.76 | 1562999 | 4.29 | 1175.34 | 4113.69 |
| 24 | Jalangi | 252477 | 30108 | 25.55 | 769259 | 3.05 | 835.62 | 2995.72 |
| 25 | Raninagar-I | 189105 | 23508 | 24.28 | 570774 | 3.02 | 827.4 | 2895.9 |
| 26 | Raninagar-II | 190885 | 32163 | 28.17 | 906032 | 4.75 | 1301.37 | 4554.79 |
| | Murshidabad District | 7103805 | 710438 | 25.89 | 18393240 | 2.59 | 709.59 | 2483.56 |

*Source : Computed by the author*

Table – 2 evaluates gross production and per hectare output of food grains in different blocks of the district during 2011-12. The study of the said Table-2 reveals that there is great variation in the total production of food grains. Higher blocks with high percentage of cropped area under food crops 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 and facilities available for cultivation such as irrigation etc. in that area. The average production of food grains of the district is 25.89 quintals per hectare put it varies from block to block between 22.72 – 29.72 quintals. Farakka, Sagardighi, Bhagwangola-I, Raninagar-II, Nabagram, Khargram, Kandi, Hariharpara, Nowda and Beldanga – II blocks has the highest per hectare production of 29.72 quintals in the fast category have more than 26 quintals food grain production per hectare. Samserganj, Lalgola, Bhagwangola-II, Raninagar-I, Domkal, Jalangi, Beldanga-I, Burwan and Bharatpur-I & II blocks fall in the second category producing 24 – 26 quintals per hectare. Other blocks may be placed in third category which produced less than 24 quintals food grains per hectare.

Table – 5.2 also shows per capita production of food grain of a year. It is obtained after dividing the total production of food grain by total population (2011). Nabagram produces maximum quantity or food grains among the blocks followed by Raninagar-II, Domkal, Nowda and Hariharpara which have more than 4 quintals per capita food grain production per annum. Beldanga-II, Khargram, Sagardighi, Jalangi and Raninagar-I blocks from together second category producing 3 – 4 quintals food grains per capita per year. Kandi, Burwan, Bharatpur-I & II, Bhagwangola- I & II, MSD-Jiaganj blocks fall in the third category producing 2 – 3 quintals per person per year. Other blocks are producing less than 2 quintals per head per year categories themselves in fourth group.

Table 5.2 shows the production of food grains per capita per day gives a measure of the availability of food grains which includes cereals and pulses. Maximum per capita per day food grain of 1304.11 grams is available in Nabagram block. Hariharpara, Sagardighi, Domkal and Raninagar-II blocks produce more than 1000 grams per capita per day, whereas Beldanga-II, Kandi, Khargram, Burwan, Bhagwangola-I, Jalangi and Raninagar-I blocks produce 700-1000 grams per capita per day. Rest blocks house less than 700 grams of food grains per capita per day. Thus per capita daily production of food grains has enabled us to measure availability of cereals and pulses in the area.

## AVAILABILITY OF CEREALS:

Cereals account for major share of the total food requirement of the population in Murshidabad district. The details of food production and consumption pattern in terms of basic agricultural produce, mainly cereals, reveal the pattern of availability of cereals per capita per day, indicating per head daily surplus or deficit in grams. In the present study of cereals production only rice, wheat, gram, maize, barley and marua are included whereas other products like pulses, oilseed, vegetables and sugarcane etc. are excluded. It is estimated that about 10 per cent of total cereal production is used either as seed or is exported to other areas or is sold out. So, the availability of cereals has been calculated from the total production after making deduction for seed and export.

**Table – 3 Availability of Calories from Different Sources in Murshidabad district (2011-12)**

| S. No | Name of Blocks | Calories from cereals | Calories from pulses | Calories from Milk | Calories From meat | Total calories Available from all sources |
|---|---|---|---|---|---|---|
| 1 | Berhampore | 1697.25 | 9.48 | 0.025 | 1.57 | 1708.325 |
| 2 | Beldanga-I | 1342.46 | 28.41 | 0.024 | 0.62 | 1371.514 |
| 3 | Beldanga-II | 3471.23 | 18.93 | 0.021 | 1.23 | 3491.411 |
| 4 | Nowda | 4324.67 | 28.41 | 0.022 | 1.39 | 4354.492 |
| 5 | Hariharpara | 4458.89 | 37.89 | 0.034 | 1.65 | 4498.464 |
| 6 | Kandi | 2857.54 | 18.93 | 0.032 | 1.11 | 2877.612 |
| 7 | Khargram | 2963.03 | 28.41 | 0.02 | 1.12 | 2992.58 |
| 8 | Burwan | 2493.15 | 18.93 | 0.025 | 1.34 | 2513.445 |
| 9 | Bharatpur-I | 2282.17 | 40.71 | 0.031 | 1.01 | 2323.921 |
| 10 | Bharatpur-II | 1975.33 | 18.93 | 0.093 | 1.19 | 1995.543 |
| 11 | Farakka | 709.59 | 18.46 | 0.064 | 0.99 | 729.104 |
| 12 | Samserganj | 239.71 | 18.31 | 0.021 | 0.84 | 258.881 |
| 13 | Suti-I | 1610.94 | 17.46 | 0.074 | 1.26 | 1629.734 |
| 14 | Suti-II | 920.53 | 41.36 | 0.073 | 1.08 | 963.043 |
| 15 | Raghunathganj-I | 1438.36 | 12.76 | 0.057 | 1.15 | 1452.327 |
| 16 | Raghunathganj-II | 383.56 | 28.41 | 0.061 | 1.17 | 413.201 |
| 17 | Sagardighi | 3653.44 | 18.53 | 0.055 | 1.53 | 3673.555 |
| 18 | Lalgola | 1495.9 | 13.56 | 0.036 | 1.26 | 1510.756 |
| 19 | Bhagwangola-I | 2598.64 | 26.74 | 0.029 | 1.23 | 2626.639 |
| 20 | Bhagwangola-II | 2445.2 | 22.36 | 0.075 | 0.14 | 2468.775 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 21 | MSD-Jiaganj | 2109.59 | 35.43 | 0.031 | 0.91 | 2145.961 |
| 22 | Nabagram | 4564.38 | 29.87 | 0.059 | 0.75 | 4595.059 |
| 23 | Domkal | 4113.69 | 31.92 | 0.041 | 1.33 | 4146.981 |
| 24 | Jalangi | 2995.72 | 18.68 | 0.025 | 1.02 | 3015.445 |
| 25 | Raninagar-I | 2895.9 | 16.75 | 8.032 | 0.96 | 2912.778 |
| 26 | Raninagar-II | 4554.79 | 19.07 | 0.033 | 0.93 | 4574.823 |
| | Murshidabad District | 2483.56 | 23.8 | 0.041 | 1.11 | 2508.511 |

*Source: Computed by the author*

Table - 3 shows the per capita availability of cereals in their respective first columns. If the prescribed balanced diet of different age groups both male and female is averaged, the per capita cereal requirement of 449 (Let us take 450) grams is attained. Table – 3 shows that all the blocks of Murshidabad district except Table – 3 portrays the availability of calories from the cereals. In general 1552 calories from 450 grams of cereal (350 calories per 100 grams) is sufficient in Indian condition to maintain good health. Table – 3 makes it clear that except get more than the required calories (1552 calories). The district as a whole gets more than 2500 calories per capita per day.

**AVAILABILITY OF PULSES:**

As per chart of balanced diet prepared by the Indian Council of Medical Research (1979) a man requires 65 grams of pulses daily which produce about 225 calories besides some protein, vitamin and calcium. Thus pulses form an important diet in our food habits.

The availability of pulse is not satisfactory in different blocks. No any blocks produced more than the required amount of pulses. All blocks produce 9.48 to 41.36 grams pulses per capita per day. The lowest availability of pulses is produced by Berhampore block (9.48 grams).

The supply of calories from pulses is the highest in Suti-II block of the district whereas Bharatpur-I receives 40.71 calories from pulses per capita per day. No any blocks calories from pulses is not available in sufficient quantity in other areas.

**AVAILABILITY OF MEAT:**

The district is poor in milk production. Per capita per day production of milk in Berhampore, Beldanga-II, Nowda, Hariharpara, Kandi, Khargram, Burwan, Bharatpur-I &

II, Suti-I & II, Raghunathganj-I & II, Sagardighi, Lalgola, Bhagwangola I & II, Domkal and Jalangi blocks above one liter whereas in Beldanga-I, Farakka, Samserganj, MSD-Jiaganj, Raninagar-I and II blocks less than 1 caloric per capita per day.

**AVAILABILITY OF MILK**:

The availability of calories from milk per capita per day ranges from in Khargram to 0.09 in Bharatpur-II Berhampore, Beldanga – I & II, Nowda, Khargram, Burwan, Samserganj, Bhagwangola-I and Jalangi blocks have the lowest availability of calories from milk (less than 0.30). Moderate availability of calories from milk is shown by all the other blocks (0.30 – 0.060) Hariharpara, Kandi, Bharatpur-I, Raghunathganj-I, Sagardighi, Lalgola, MSD-Jiaganj, Nabagram, Raninagar – I & II blocks. Although the total population milk is highest above 0.060 in Bharatpur-II, Farakka, Suti-I & II, Raghunathganj-II and Bhagwangola-II blocks but the population is large in these blocks and hence per capita availability is lower.

**CONCLUSION:**

Population and land use deal with the interrelationship of the two elements in a regional framework. The field of population and land use has changed from narrative and descriptive to analytical quantitative and inter – disciplinary. The countryside in India is largely rural depending upon agricultural use of land. The most disturbing trend in the rural areas is rapid population growth. One aspect of this growth is that a large proportion of the population is too young for work and the other aspect of that growth is that there are too many people to be supported by the low productive land. The result is absolute poverty which means a condition of life so characterized by malnutrition, illiteracy, religious blindness and disease as to be beneath any reasonable definition of human decency. The sum up the above discussion it may be argued that the study of population pressure on land use is still relevant for micro – level development at village, panchayat, block and district level. We often plead for Chinese model of population control policy and advanced nations' policy in India also, so that our country will be a model country among the whole earth.

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