Chapter - I

INTRODUCTION

The British colonial rule destroyed the cottage industry base and stressed over the plantation of crops to be exported to Britain and Europe and mostly Indian agricultural products were exported for the import of manufactured goods. Traditionally, Indian agriculture was not organized as an industry but as an activity of marginal subsistence for the bulk of the country's population. The farmers motivation was not to create marketable agricultural surpluses but to produce enough for the minimum requirement of the agricultural population. As long as the excess population was removed through natural though unfortunate causes like famine, disease and infant mortality, there was no strong reason for change in traditional attitude towards subsistence agriculture, which was based on empirical experiences of the agriculturists.

With the dawn of new era the mortality rate became very low due to facilities provided but people did not adopt measures for birth control, resulting in unprecedented growth of population. The overcrowding of the people on the arable land and lack of alternate means of livelihood forced the cultivators to expand the arable land. The frontiers of arable land has already pushed to the limit that bringing of new area under plough is very difficult if not impossible. In the decade of seventies it was realized that the solution of the problem was not the expansion of agriculture on new land but intensification of agriculture adopting the new technology and investment (input) in form of reformed seeds, fertilizers, pesticides, insecticides and means of irrigation.

The desire to improve living standard, caused by education and outward knowledge, has increased the money requirements of the rural population. Therefore, besides the transformation of the traditional subsistence agriculture to feed the swelling population and to produce the marketable surpluses, it is essential to develop village and cottage industries. It requires to rejuvenate the old industries and accelerate and expand the new one, if they have originated by chance. For rural development, in a highly populated region like eastern uttar pradesh, the household and cottage industries have no substitute because they distribute the income to the peasantry by giving employment to the maximum number. Actually they
have no big capitalists and they are owned by the people, run by the people and the profit is shared by the people. They are very beneficial for the marginal and landless village workers. They do not pollute the rural ecosystem.

After independence rapid development took place in agriculture and industry with a view to improve the living standard of the people but the multiplying population betrayed the objective. To make the planned development, the country undertook seven five-year plans till now, during which all-round progress was achieved. In spite of the population growth of 86 crores in 1991 from 36 crores in 1951, the availability of foodgrains in 1991 was 495 grams per day as compared to 395 grams in early fifties. It means that the agricultural growth took place at a faster rate than the population growth.

The regeneration attempt in successive five-year plans has brought tremendous development in agriculture. Now it provides livelihood to 70% of the labour force and cultivators and contribute to 32% of the net national production. Compound growth rate in agricultural production during the period 1949-50 to 1980-91 was 2.69% per annum while that of population was normally below it. The result was agricultural surpluses. To boost the agricultural and allied products, two rapid campaigns were undertaken i.e. Green Revolution late in sixties followed by White Revolution during eighties. During these movements a large number of projects were undertaken and organisations and institutions like National Seed Corporation, State farm Corporation of India, Central Seed Committee, and Indian Council for Agricultural Research were formed.

Under present circumstances the productivity of land has a limit while the growth of population is limitless. In agricultural growth a point comes when the area under cultivation neither increases nor remains static but decreases due to residential, industrial and cultural demand of increasing population. In intensive cultivation too, after a limit the return per unit area against investment in form of labour and capital falls very low and becomes uneconomic. In such conditions, the only alternative left with the farmers is to develop allied agro-based occupations, agro-based industries and household and cottage industries. The allied agriculture based occupation
includes animal husbandry, horticulture, poultry and fish culture.

The animal husbandry in India is essential and important component of agriculture and plays a significant role in rural economy. It is highly gainful for marginal farmers and agricultural labourers. It includes cows, buffaloes, goats, pigs, sheep and poultry. Since independence a lot of projects were undertaken to develop animal husbandry. The Intensive Cattle Development Project (I.C.D.P.) and Special livestock Breeding Programme (S.L.B.P.) were pioneer programmes regarding animal husbandry. The operation flood, the world's largest integrated dairy development programme based on Anand Model was in third phase and lasted till 1995. It started with the slogan of 'white revolution' and the result was that the milk production of 210 lakh tonnes at the beginning of operation flood reached 645 tonnes in 1995. It made a significant contribution by raising per capita availability of milk in India from 107 grams per day in 1970 to 193 grams in 1995. According to an estimate in 1994-95 the gross value of output from this sector was about Rs. 46,300 crores, being 25.7% of the total agricultural output of Rs. 787,200 crores.

Poultry is one of the important components of the farmer's economy. It provides additional income and job opportunities to a large number of rural population in shortest possible time. Central poultry breeding farms are engaged in scientific poultry breeding programme and have developed high egg production and hybrid and fast growing broiler strains. The National Agricultural Co-operative Marketing Federation has been entrusted with marketing of eggs and poultry at national and regional levels. Government is also helping in the development of sheep, goats, pigs and fish culture.

Horticulture includes fruits, vegetables, medicinal and ornamental plants. It is important activity in agriculture to diversify the products, increase per capita and per unit area income, generate more employment opportunity, improve environment and ensure better nutritional status of population.

In Sathiaon Block like many other areas of eastern uttar pradesh the,
per capita agricultural land is reduced to be 0.08 hectares and it is still poor in some pockets. The inability to increase the per capita land and agricultural production makes the surplus population move in search of an alternative occupation either to feed themselves or to increase the per capita income. The first alternative to agriculture is industry. The Government knows the problem and so many surveys were made to assess the industrial potentialities. However, the progress of industrialization was very slow in eastern U.P. No doubt the sugar mills were established and the number of public sector enterprises increased and on national level, during seventh plan period, the resultant growth was 8.5%. But Azamgarh district still remained industrially backward and recently it has been declared a district without industry.

Knowing the carrying capacity of land under present farming system and growing population on alarming rate, the transformation and innovation in agriculture and development of village industries is necessary. Before any planning the proper study of present resources and their utilization is essential. The Government agencies made such surveys from time to time, but they are not always reliable, therefore a geographer must make his own observation before reaching a conclusion. Khadi and Village Industries Commission (K.V.I.C.) is doing well in some areas. The village and household industries help weaker section of the society utmost as Sc/St, which constitute 33% of the labour force engaged in such industries. It is 86.73% in Sathiaon Block.

THE STUDY AREA:

Sathiaon Block has an area of 16,304 hectares, of which 78.69% is agricultural land, engaging 55.14% of total population as farmers and 9.40% as landless agricultural labourers. Azamgarh the district headquarters is at a distance of 12 kilometers from Sathiaon, the Block headquarters. Mubarakpur, a municipal town with population of 45,388 persons is situated in the northern part of the study area. New service centres and townships are developing in Sathiaon, Shahgarh, Amilo and Ibrahimpur. A Sugar mill is functioning at Sathiaon since 1974. Mubarakpur is the biggest centre of Banarasi brocade saree in Eastern U.P. The silk handloom industry, producing these sarees is now diffused and the villagers surrounding the nuclear point in a radius of 10 kilometers are contributing the major share
of the total production. The entire area is under the influence of the two towns namely Azamgarh and Mubarakpur. No doubt these urban centres have influences the economic, social, cultural and educational structure of the whole area. There are villages between Azamgarh and Mubarakpur, which are in dual influence. They have the industrial ties with Mubarakpur and cultural, educational, administrative and commercial ties with Azamgarh. However the whole area deserves a thorough analysis of the present agro-industrial co-relationship and its balanced future planning.

THE CONCEPT OF AGRO - INDUSTRIAL INTEGRATION :

Agriculture, the main occupation of rural people, gives employment and feeds the maximum number. Due to more than required persons engaged in agriculture, the per capita income of the farmers is very low and living standard poor. The law of succession, the growing population and repeated partition of families has reduced per capita land and has made the holdings uneconomic. The farmers due to their family tradition little chances for other employment and being afraid of migration risks, are helpless to get themselves engaged in scanty ancestral farming. Thus the majority of peasantry is living below poverty line.

It is high time to decide the optimum number to work in agriculture and the remaining population that should be transferred to occupations other than agriculture i.e. household and village based small scale industries. Thus agriculture and industry must be integrated for the benefit of the country and the people. The agriculture should not be ignored for broader interest of the country to avoid foodgrain import from abroad and the industry must be developed for the benefit of the peasantry. It is the earnest need of the time to establish equilibrium in agricultural and industrial development. Thus agro-industrial integration deals with equilibrium in agriculture and industry, which is the need of the time to save the national as well as individual interest.

The agro-industrial integration is a state of equilibrium at a given time between agriculture and industry. It is not static but the growth of population and change in industrial components may disturb this state of
equilibrium. The study of agro-industrial integration in Sathiaon analyses the present condition of agriculture and industry in all respects. It measures the impact of household industry on rural society through sampling and suggests the means for their development and distribution keeping in mind that it must not affected agriculture the main occupation.

India has neither big mechanized farms nor that stage of industrialization like some countries of Europe that can change the place of agriculture from first to second. In coming years industry may not substitute it but co-ordinate it. The degree of co-ordination should be decided keeping in mind the place and time and it must not be the same all the times for every where.

THE RESEARCH DESIGN AND REVIEW OF LITERATURE:

The first part of the thesis describes the physical factors including location, physiography, drainage, climate, vegetation and soil of the Sathiaon Block, the area under study. The physical factors have influenced human activities since time immemorial. Despite scientific developments too, man cannot escape his geographical surroundings completely. Man is what geographical environment makes him. Besides geographical environment, location in reference to urban centres and good means of communication besides the nature of agriculture and industry. Physiography, drainage, climate and soil decide the growing season, crops and productivity of the region. It also decides the capability of human body to work and working hours.

The study of human resources is most important because man is the centre of all economic activities. He develops resources for his own benefit as he is the single consumer of all that he produces. The study area is over populated and its traditional occupation of farming has failed to fulfil the human requirements. The growth rate of 22.6% (1971-81) has increased to 30.99 % (1981-91). It is possible that maintaining the same rate, in coming twenty years the population will increase by 71.9% leaving much behind the food production in the area. The traditional family profession will prove uneconomic and population will face acute shortage of food and consumer's goods. Therefore it is necessary to
interpret the term optimum population and over population in reference to Sathiaon Block. As the per capita agricultural land is decreasing, the percentage of agro-based population should be minimised and the growth of agricultural density must be checked before reaching the hunger point.

The second part of the thesis deals with economic activities like agriculture, industry, means of communication and their impact on ecosystem. It also deals with their interrelationship and their impact on human life.

Agriculture is still the most important economic activity that feeds 81.07% of total and 93.87% of the rural population and provides raw material to a large number of industries in Sathiaon Block. The agricultural geography is a developed branch of geography and geographers from India and abroad have equally contributed to the geographical analysis of agriculture. Now agriculture is not confined to raising crops only but it includes horticulture, animal husbandry, poultry and fish culture. It is often said that agriculture is an uneconomic occupation and educated persons do not like to work in agriculture. Therefore the study of existing farming system and calculation of its productivity is necessary. The farmers should be encouraged to produce agricultural surpluses in form of cash crops, fruits, vegetables, milk, meat, poultry and fish. It will make the agriculture profitable and improve the economic condition of the farmers. The market and collection centres should be developed. The present crop combination should be studied and new cropping system must be suggested.

The agricultural productivity has been a theme for study to geographers since long as it decides the carrying capacity of land. Thompson (1926) while measuring the relative productivity of British and Danish farms emphasised and expressed it in terms of gross output of crops and live stock. Ganguli (1938) presented the theoretical discussion for computing productivity in agriculture. Kandal (1939) treated it as a mathematical problem, Hirsch (1943) has suggested ' crop yield index ' as the basis of productivity measurement. Stamp (1958) suggested another method for measuring the agricultural productivity by conversion of the total agricultural production into calories. Loomis and Barton (1961) have measured United
States agricultural input and productivity in aggregate. Oommen (1962), while working out the trend of productivity in agriculture in the state of Kerala, has measured productivity on the basis of yield per acre. Garg (1964) worked out the trends of agricultural development with respect to total cropped area, gross irrigated area and food grain production in the two districts of U.P. i.e. Gorakhpur and Meerut. Sapre and Deshpande (1964) have attempted to refine further the Kendall's 'Ranking Coefficient Method'. They used 'weighted average of ranks' instead of single average rank. Sharma (1965) suggested more than one method for measuring agricultural productivity. The most simple is the calculation of productivity based on land, labour and capital. Khusro (1965) has linked assessment of productivity with the output per unit of a single input and output per unit of cost of all inputs in agricultural production. Agrawal (1965) has suggested 'Factorial Approach' while measuring the agricultural efficiency in Baster district of M.P. Shafi (1965) has asserted the productivity on the basis of labour population engaged in agriculture. Out of these geographers Enyedi (1964) is most simple in calculating productivity in Hungary. In this volume the method suggested by Sharma is used to measure the productivity in Sathiaon block. The input and output cost for an hectare is calculated on present market rate of important crops to calculate agricultural profit and loss.

The multiferious effect of urban centres on agriculture was long realised by Von Thunen (1926) and further modified by Hoover (1937), Dunn (1954), Isard (1956) and many others. Loesch claimed that Von Thunen's land use rings were in fact special cases. Certainly a number of conditions must be fulfilled for concentric land use rings to arise. Though Von Thunen's example is not completely applicable in present context due to the complex requirements of the modern town. But it can not be rejected completely. Still the urban centres have their own impact on perishable agricultural products in Ganga plain. Though fast means of communication have assured the supply of perishable articles like vegetables, milk products, meat, fish and poultry products but still local fresh products are preferred. The daily coming and going population to cities makes neighbouring villages and urban centres economically and culturally interdependent. The area under study is under the impact of two municipal towns of Azamgarh and Mubarakpur and many of growing towns like Shahgarh, Sathiaon,
Mohammadabad, Amilo, Ibrahimpur and Khairabad. The silk handloom industry of Mubarakpur is in defused condition and shifting towards villages. Fresh agricultural products including dairy products, vegetable and fruits, meat, poultry products and fish are coming daily to these urban centres. Daily wage earners, industrial labourers, service class people, sellers of village products, buyers of finished goods and students daily in and out migrate to these towns in thousands.

The present survey of Sathiaon Block was undertaken to decide the industrial trend. On the basis of raw materials, they are of two types - the agriculture based and non-agriculture based. Sathiaon sugar mill, a cooperative enterprise is the only agro-based heavy industry in the area. In the non-agro-based industries Banarasi brocade sarees producing silk handloom industry is the most important industry with its centre at Mubarakpur. The other industries, except Roadways Regional Workshop at Samenda, are quite small as oil, rice and flour mills, black Smithy and carpentry workshops, repair workshops of diesel engines (tractors, jeeps and motor), electric motors, agricultural implements like harrow and thrashers. Among all these industries, as regards the labour force employed and the running capital, silk handloom industry producing Banarasi sarees comes first. The nucleus of the industry was Mubarakpur and from there it defused to spread in surrounding villages due to many socio-economic reasons. Mubarakpur is still its nucleus and the impact decreases with increasing distance from the town. Khairabad, though outside the block area, lying in Mau district has a severe impact on its eastern part, as a powerloom centre.

The survey shows that the block area has industrial potentialities specially in the field of weaving. The area deserves for the industrial planning for the betterment of surplus population, not engaged in agriculture. The Sathiaon sugar mill has two byproducts - the molasses and the vogases. From rural areas the rice straw, husk and wheat straw is abundantly available. Sathiaon is a railway station and cheap usal land is available nearby. Thus it deserves to develop as an industrial estate.

The study aims at balanced integrated economic planning of population, agriculture and industry. It will check over crowd on agriculture
and unemployment and will give work to every hand and bread to every mouth.

THE PREVIOUS STUDIES:


THE HYPOTHESIS:

Many Geographers have treated the population, the central places, agriculture and industry as separate entities. The authress believes that if they are studied in a combined relationship one interacting with the other, it will satisfy the various needs of the society. The present work attempts to analyse the findings in a combined manner on the following points.

1. The agriculture has an optimum production, beyond which it ceases to feed the surplus population and the surplus population must be transferred to industry or any other productive occupation.

2. The distance from urban centres decides the change in agricultural components like animal husbandry, horticulture, poultry and fish culture and land use density decreases with increasing distance from the central places and urban centres.

3. After the diffusion of a household and cottage industry, the intensity of the industry decreases with the increasing distance from the nucleous.
4. Any development plan to bring prosperity to the masses will not be successful without a check on population growth.

5. The theory of Von Thunen may not be totally rejected and it deserves to be tested on various components of economic geography.

THE DATA SOURCE:

There are many departments to supply data for research work. The district statistical office supplies maximum data concerning every department. The revenue, agriculture, animal husbandry, fishery, P.W.D., irrigation, industry and census department supplies data related to their departments. There is a block office at Sathiaon to help such investigations.

Besides these data sources, keeping in mind the time limit, nine sample villages, one from each Nyay Panchayat on random sampling method, were selected to ascertain the potentialities for agro-industrial development in the study area. The village survey with various viewpoints was undertaken. It revealed so many facts often ignored by the government departments.