The role which the landless labourers play in the agricultural economy is very crucial and important because the availability of labour is a major constraint in the agricultural land use and cropping patterns of a region. Labour represents all human services other than decision making and capital. The availability of labour, its quantity and quality at the period of peak labour demand have great influence on decision making process of the farmers.

With the increase in population, the land base of rural economy being the same and without any significant diversification, the incidence of rural labour has been continuously increasing. An increase in the total labour force from 174 millions in 1961 to 314 millions in 1991 was observed. As a proportion of the total rural labour force, the percentage of landless labourers has also increased from 18.0 percent in 1961 to 26.1 percent in 1991. This implies that marginal farmers have been swelling the ranks of landless labourers. On account of the increasing economic compulsions in terms of past debts, they have been forced to sell their lands. This supports the popularly held view that the benefits of millions of rupees invested in irrigation, tubewells, fertilizers etc have gone to the big farmers. It also implies that cooperatives and rural banks have also helped the rich farmers.

Landless labourers have been defined as those who are basically unskilled, unorganised and who work in farms on wages for a larger part of the year. But when they do not get work in the villages some of them migrate outside their villages in search of work. Indian economy is primarily an agricultural economy. Nearly 75.0 percent of the working population derive its livelihood from agriculture because land provides not only raw materials for some of the principle industries like cotton, jute and sugar etc. but it also accounts for nearly 35.0 percent of the total income of the country.

Aligarh district is one of the agriculturally advanced districts of Uttar Pradesh. It is one of the ten districts of Uttar Pradesh (total number of districts in U.P. are 70) which came under the category of highest level of development. Technology was ushered in this district from early sixties because this district was selected for Intensive Agricultural District Programme (IADP) in 1961-62 with a view to accelerate the food production by providing the farmers with all the requisite inputs. The result was that this district made rapid strides in agriculture and high growth rates were recorded in agricultural output and productivity. The main aim of agricultural development in poorer countries is higher farm output while rural development means the improvement of material and social welfare. The first
provides the basis for the second since agriculture largely generates the income. Direct income to the land owners through crop production and through employment to the labour force. So in such an agriculturally advanced district it was thought worthwhile to examine the 'Distribution of Landless Labourers and their Role in Agricultural Economy of Aligarh District'.

The present study has certain specific research objectives:

1. To study the distribution and growth of landless labourers in the study area.

2. To assess the general characteristics of the sampled landless labourers like their number, age, sex and religion-wise distributions, family size, marital and educational status, amenities and facilities availed by them and awareness of various government programmes.

3. To assess the employment of the sampled landless labourers in the agricultural sector i.e. number of workers employed, type of work done, month-wise and season-wise employment, wage rates and employment through animal husbandry etc.

4. To assess the employment of the sampled landless labourers in the non-agricultural sector, i.e. number of workers employed, type of work done inside and outside the village, number of days of employment, wage rates, various aspects of daily commuters and seasonal migrants.

5. To assess the employment of children of the sampled landless labourers in the agricultural and non-agricultural sectors.

6. To assess the social conditions of the sampled landless labourers like their income, assets, expenditure and various aspects of indebtedness.

7. To assess the role of the sampled landless labourers in the agricultural economy of the study area, their role in crop-wise and season wise operations, in various agricultural operations in different farm sizes, in various livestock operations, impact of new agricultural technology on their employment and income and problems of unemployment.

The data were collected from both primary and secondary sources. Data from primary sources have been collected through field surveys, household surveys,
interview with landless labourers and discussion with government officials. The field work was done by the author during 1995 and 1996. For getting accurate information, landless labour households were visited frequently. A questionnaire was designed to collect the relevant information related to socio-economic conditions of landless labourers. Sufficient care was taken to make the questionnaire communicable to the respondents. The respondents for household questionnaire were the heads or important persons of the households. Data from secondary sources have been collected primarily from District Census Handbook of Aligarh (1961, 1971, 1981 and 1991) and statistical Bulletin (Year-wise from 1961 to 1991).

The sample design was a purposeful one having two stages:

i. The first stage consisted of selecting villages randomly from the study area. From every block (The district has 17 blocks) 5 villages were selected and in this way 85 villages were selected from the whole district.

ii. The second stage consisted of selecting the landless labour households from the 85 villages. From every village 10 landless labour households were selected randomly. In this way 850 landless labour households were selected from the whole district.

iii. Simple percentages have been calculated for the easy understanding of the data.

The following hypotheses have been tested in the present work.

i. The role which the landless labourers play in the agricultural economy is very crucial and important because the availability of labour is a major constraint in the agricultural landuse and cropping pattern of a region. They influence the decision making process of the farmers.

ii. Agricultural congestion constitutes a major impediment to raising agricultural production and productivity and despite rapid urbanization a major proportion of the growth in labour force will continue to occur in the rural areas.

iii. Agriculture provides employment to most of the landless labourers but seasonal unemployment remains on most of the holdings while there is shortage of labour during the peak periods of crop sowing and harvesting.
iv. Few job opportunities occur outside agriculture. Unemployment compells the landless labourers to move outside the villages in search of better employment where the conditions are worse.

The present work is organized into three parts spread over seven chapters.

Part one is devoted to the general description of the landless labourers in Aligarh district. This part comprises of two chapters i.e. first and second. In the first chapter, the distribution and growth of landless labourers in Aligarh district has been discussed. The second chapter deals with the general characteristics of the sampled landless labourers. It covers population characteristics like age, sex and religion-wise distributions, their family size, marital and educational status, amenities and facilities availed by them like health care, drinking water, school and electricity facilities, awareness of various government programmes like Anti-poverty, Minimum Wage Act and Family Planning etc.

Part two is devoted to the study of economic and social profile of the sampled landless labourers in the study area. This part spreads over four chapters i.e. third, fourth, fifth and sixth. In the third chapter an attempt has been made to assess the employment of the sampled landless labourers in the agricultural sector; number of workers employed, type of work done, month-wise and season-wise employment, wage rate and employment through animal husbandry. In the fourth chapter an attempt has been made to assess the employment of the sampled landless labourers in the non-agricultural sector both inside and outside the villages, daily commuters and seasonal migration. Chapter five makes an attempt to assess the employment of children of the sampled landless labourers both in the agricultural and non-agricultural sectors. In this chapter the family background of the working children, general profile, economic profile and social profile of the child labourers have been studied. The sixth chapter is devoted to the analysis of income, expenditure and indebtedness of landless labourers in the study area.

Part three presents the crux of the problem investigated. This part comprises of only one chapter i.e. seventh. In this chapter an attempt is made to investigate the role of landless labourers in the agricultural economy of the study area. Assessment has been made of the role of the sampled landless labourers in crop-wise and season-wise operations, in agricultural operations, in farms of different sizes, in various livestock operations, impact of new agricultural technology on their employment and income and unemployment problem.
The main conclusion that arises from the study is that inspite of the introduction of technology in agriculture especially the use of modern agricultural machinery and implements, the landless labourers still play a very important and crucial role in the agricultural economy of Aligarh district. Agricultural operations cannot be completed without them. The availability of labour is a major constraint in the agricultural land use and cropping pattern. The quality and quantity of labour available at the period of peak labour demand still has great influence on the decision making process of the farmers. Inspite of urbanization and industrialization, there is a regular growth of the landless labourers and agriculture provides employment to most of them. Seasonal employment is a conspicuous feature of the agricultural sector and this compells them to migrate outside their villages to nearby villages or to some town or city in search of job where conditions are worse.

The following general conclusions may be drawn from the study:

i. The number of landless labourers is large and growing rapidly in Aligarh district. There has been 276.6 percent increase in the number of landless labourers during the last thirty years. This tremendous increase is the result of rapid growth of population, decline in the number of workers engaged in the household industries, fragmentation of holdings, increase in the cost of use of agricultural technology and increase in intermediaries.

ii. Agriculture provides employment to almost three quarters and the bulk of the addition to the total labour force will continue to be absorbed in the agricultural sector. But it was observed that (a) employment opportunities in the agricultural sector tended on the whole to lag behind the increasing number of labour force in the study area. (b) There is heavy dependence on the agricultural sector which has resulted in under employment and constant migration of landless labourers in search of better employment in the city. (c) The employment in the agricultural sector is either casual or seasonal. (d) Male, female and children all work in the agricultural sector. They do the work of harvesting, threshing, weeding, irrigating, transplantation, interculture, sowing, applying manures, winnowing and preparing the fields. (e) From the type of work these labourers do it is evident that they are not occupied for the whole year in the agricultural sector. On an average, a labourer gets work in the agricultural sector for 131.2 days in a year. Male labourers were employed for 161.4 days while female labourers were employed for 101.1 days. (f) Average wage rate for male labourers is Rs. 27 per day and for
female it is just Rs. 15 per day. There was variation in wages paid for different cropping seasons, for various agricultural operations and for male and female labourers.

iii. The growth of employment in the non-agricultural sector in the study area is a result of 'distress phenomena' of unemployed agricultural labourers who are forced to undertake non-farm work either in the villages or as daily commuters or as seasonal migrants to some far off urban centres. (a) Inside the villages they work as loaders, rag-pickers, basket makers, constructional workers, match industry workers, pot makers, and weavers. On an average, they get employment for 30 to 50 days. Male labourers get employment for 51 to 70 days while female labourers get employment for 30 to 50 days. The wage rates are higher than in the agricultural sector being Rs. 20 to 35 per day. (b) Daily commuters are mostly male labourers. They migrate from a distance of 5 to 30 kilometers to Aligarh city. They do the work of baildar, in lock factories, in brick making, loading, construction, tonga pulling, glass making and repairing. They get employment for 20 to 50 days. The wages are high ranging between Rs. 35 to Rs. 50 per day. (c) There are more seasonal migrants than the daily commuters. They have migrated to Dadri, Delhi, Ghaziabad, Noida, and Firozabad. They work as baildar, in glass factories and in sarya mills. Their number of days of employment ranged between 51 to 60 days. Their wage rates varied between Rs. 30 to Rs. 50 per day.

iv. The children of landless labourers are also doing the work in the agricultural and non-agricultural sectors to supplement the meagre income of their parents. (a) In the agricultural sector they work for mostly 10 hours a day. Male children get employment for 101 to 200 days and female children for less than 100 days per year. They are involved in operations like peeling, transplantation, caring of cattle, weeding and sowing. On an average, they are earning Rs. 13 per day. Male child labourers get wage Rs. 26 per day while female paid just half of male child labourers.

v. The major source of income of the sampled landless labourers was from the agricultural sector (56.3 percent). The average annual per capita income was Rs. 2,444. More than 60 percent families had katcha houses. The major share of family budget is spent on food and clothing. They borrow money mainly from money lenders on high interest rates. Thus, majority of them are in debt and remain in the grip of money lenders.
The basic hypothesis was further assessed by assessing involvement of landless labourers in crop-wise and season-wise operations, in various agricultural operations, in farms of different sizes, role after the introduction of new agricultural technology and in various livestock operations.

Role of landless labourers in Crop-wise and season-wise operations:

Kharif season lasts for nearly four and a half months. On an average, the landless labourers are employed for 52.9 days. Male landless labourers work for 68.3 days while the female work for 37.5 days. The farmer's decision regarding the sowing of arhar, maize and sugarcane still depends upon the availability of labour. Rabi season lasts for five and a half months. During this season, on an average the labour is employed for 71.2 days. Male labour is employed for 82.7 days while female labourers get work for 59.8 days. The availability of labour is again crucial at the time of sowing and harvesting of wheat, potato and peas crops. This shows the crucial role played by the landless labourers during the kharif and rabi seasons. The farmer's decision regarding the cropping pattern still depends on the availability of labour.

Role of landless labourers in various agricultural operations:

Out of the total male labour days (161.4 days), 33.2 days are devoted to harvesting, 28.7 days to sowing 18.3 days to irrigate the fields, 13.4 days to interculture, 13.1 days to fertilizer application, 11.0 days to threshing and 10.2 days to preparation of land. Out of the total female employment days (101.1 days), 35.4 days are employed in harvesting, 19.6 days in weeding, 14.0 days in interculture, 10.0 days in sowing, 9.0 days in transplantation and 6 days in threshing. This shows that operations like harvesting, weeding, sowing, irrigating the fields cannot be completed without the help of landless labourers. Farmers fully depend on them for successful and timely completion of agricultural operations.

Role of landless labourers in farms of different sizes:

The demand for labour is determined by the size of the farm. Several factors influence the decision making process of the farmers in the selection of crops grown by them. Field surveys revealed that large farmers were the most affected by the availability of labour at peak season followed by medium and semi-medium farmers. The large farmers still suffer from the same old problem of indifference and uncertainty of hired labour.

Role of landless labourers after the introduction of new agricultural technology:

The role of landless labourers has increased after new agricultural technology because their number of days of employment increased due to multi cropping but the wages are low as the supply of labour is quite elastic.

"elastic" supply of labour implies that the supply would decline with wage; the opposite is likely the case.
Role of landless labourers in various livestock operations: The role of landless labourers in the livestock operations is in no way lesser than in the agricultural operations. On an average, the landless labour is employed in livestock operations for 68.8 days. Male labourers are involved in feeding for 14.8 days, in bringing fodder for 11.1 days, in chaff cutting for 8.3 days. Female labour has significant role in feeding (18.5 days), milking (16.3 days) and bringing fodder (15.7 days).

Although the landless labourers have played an important and significant role in the agricultural economy of Aligarh district, still the problem of unemployment and underemployment exists.

The analysis presented in study has a number of far reaching implications for the formulation of appropriate policies related to the improvement in the economic and social conditions of the landless labourers, towards increasing the rural employment potential in both the agricultural and non-agricultural sectors, towards creation of jobs in the village itself, towards creation of better employment environment for women and towards abolition of child labour.