Agriculture employs (with forestry and fishing) about two-thirds of India’s workforce. Most land is farmed in smallholdings, averaging about 1.5 hectares (about 3.7 acres) in the late 1990s. About half the land in India is cultivated by farmers owning more than 4 hectares (10 acres), but few farms are larger than 20 hectares (50 acres) due to land reforms that imposed ceilings (maximum limits) on holdings. Most Indian farmers, particularly those who own smaller farms, cultivate their land by hand or by using oxen.

India’s most important crops include sugarcane, rice, wheat, tea, cotton, and jute. Other important cash crops include cashews, coffee, oilseeds, and spices. Another central feature of India’s agricultural economy is the raising of livestock, particularly horned cattle, buffalo, and goats. In 2003, the country had 226 million cattle, substantially more than any other country. The cattle are used mainly as draft animals and for leather. As farmers increasingly use machinery, the number of livestock they raise will probably decrease. Buffalo is the main animal used for producing milk and dairy products. Milk production and distribution increased dramatically in the 1990s because of a nationwide, government-supported cooperative dairy program. Sheep are raised for wool, and goats are the main meat animal. Many Indians, particularly Hindus, refuse to eat beef for religious reasons, although they eat other meat, eggs, and fish.

Agricultural production faces occasional declines because of irregular monsoon seasons, resulting in widespread flooding or drought. Food imports help offset yearly fluctuations in output. India faces many future challenges in producing enough food to feed its growing population.
Production of food grain has barely kept pace with the rate of population increase. The government-implemented Green Revolution, which took hold in the 1970s, encouraged the use of high-yielding crop varieties, fertilizers, and carefully managed irrigation. It resulted in a steady growth in production of food grain, allowing India to achieve self-sufficiency by 1984. However, success has been limited to areas of assured irrigation, such as northwestern India and the deltaic regions. Output has not significantly improved in dry and semiarid areas, where poverty and malnourishment remain prevalent.

In Indian Economy, agriculture plays vital role both in social, and political arena as major part of the population resides in villages, whose means of livelihood is farmining and related activities. Thus, its span of influence stretches not only to economy and industry but also to foreign trade and foreign exchange. The 70% of the Indian population resides in villages and the 70% of total cultivated land is used for growing food grains and rest of the land that is about 30% for the cash crops. The one-sixth of the land holdings is very small which is about two or less than two hectares. The average size of land holdings is about one. 57 hectares and that consist of 76.2% of the total land that is far low in compassion to the world’s holdings.

In spite of the presence of modern technology, in most parts of the rural area, farming is done with the help of traditional means and methods, that has resulted in low productivity far as land and labour is concerned.

There have been so many changes in agriculture after independence; these changes occurred due to government adopted the policy of Five Year Plans. In the First Five Year Plan, agriculture was given top priority to develop rural economy. The success of agriculture development has given
new turn to economic planning. The industrial development was the priority in the Second Five Year Plan; as a result, the progress in agriculture was not as expected. In the Third Five Year Plan, the concept of balance economy was adopted, which resulted in the **Green Revolution**. There was continuous success in achieving the expected targets of foodgrains. However, the development was only in those regions where the use of modern instruments and irrigation, quality seeds and chemical fertilizers were present whereas the most of the rural regions were still legging behind. From the very beginning of **Community Development Plan** (CDP), main thrust was given on the agricultural development.

All the same, the hills of Uttaranchal remained deprived of all these advancement. When the CDP was initially introduced in some of the blocks and gradually in all districts, main aim of the project was to prepare agricultural plans on the local basis and using modern technology accelerates the pace of agriculture development, which continued until the **Third Five Year Plan**. However, this plan had lost the force until the beginning of **Fourth Five Year Plan**.

Uttaranchal is the 27th state of union of India, this newly carved out state is 11th Himalayan state, having 53,483 square kilometer of area and populated by 8.48 million of people as per the census of the year 2001.

Out of the total area of the state, only about 13% is cultivated and it is done by 70% of its people. Being in the Shivalik ranges, it is rich in its biodiversity and almost 63.58% area is covered with forests, cultureable waste land 5.9% current fallow land 0.22%, other fallow land 0.80%, wastes and
non-cultureable land 5.53%, land besides agriculture 2.3%, grazing area 5.04% land under horticulture and trees 3.85%.

In Uttaranchal agricultural land mostly depends on rainy water and there are lack of wells and canals. The total irrigated area is 551054 hectare and net irrigated area is 343407 hectare. The means of irrigations are 29.66% area by canals, 52.69% area by tub wells, 5.38% area by wells, 0.026% area by Ponds and rest 12.24% by other means.

The foodgrains are produced in 86.8%, Soyabean and Sugarcane in 5.8% of the total land and rest is used for other crops. The sugarcane is produced only in areas like Terrain -Dehradun, Udham Singh Nagar and Haridwar. The Per hectare average production of wheat is 11.28 quintal, barley-11.3 quintal, maize 11.36 quintal, and potato is 151.70 quintal.

After independence, most of the achievements were in the field of horticulture that extends up to 1600 hectare of the land and 2000 ton was its production. Now it is 345157 hectares and covers about 6.47% of total geographical area. Out of this total horticulture land 75.93% is covers by orchard, 17.9% by vegetables and rest 6.17% is used for potato.

‘Hill Agriculture and its Role in Regional Development’ in District Pauri as a subject for research is important due to many reasons. First, Uttar Pradesh government had officially declared this region as backward. It is quite evident from the fact that in this age of science and technology there is still no sign of this evolution in the district. Agriculture has been a main source of income and employment. Thus the study of this area has a great significance. Agricultural development was of prime importance in the Five
Year Plans but the desired goals were not achieved. There remained wide gaps between agricultural requirements and Government Planning. There is still a possibility of self-reliance in agriculture. This possibility called for study an extensive.

Regional development has always been part of overall development of any country. Pauri District that is subject of study has been dwelt on with through study of the constituent of the agriculture such as land, irrigation, manure, farmer, tools and technology, income, production, productivity and employment aspects etc.

Being an agrarian country agriculture and regional development go hand in hand. It applies equally to the district Pauri where only two means of livelihood are available, one is services, that include government and private and other agriculture.

The maximum part of district Pauri is rural, where about 62% of population is engaged in agriculture and its related business. Some people are there who solely depend on agriculture. Their yield. Is sufficient to sell a part of it. Most of the farmers are not able even to cater their own requirements that are because of their traditional methods and small size of holdings.

The livestocks are the important tools for agriculture economy. There are no quality cattle even after the government’s efforts. There is also lack of milk providing cattle. Maximum 85% people of rural areas have oxen that work only 30 days in a year and rest of the period they remain out of work.
Hills and dales, smallholdings, and scattered fields are the characteristics of the district Pauri. Rainfalls cause incessant soil erosion, which in turn results in low productivity. The study of given agricultural areas shows that only 12% is Pure Sown Area on which depends 70% of the total working population. The pressure of population on land has led it to divisions and sub-divisions that have made the size of fields very small. As the result, most of the population depends on market supplies of foodgrains. After independence, there was some growth in agriculture but that was not sufficient.

The use of the land other than agricultural is for horticulture, which is more profitable than agriculture. However, it is in only 5.56% in the district, which is very low, because maximum area is covered with either forests or rocks. As there is no further possibility of growth in agriculture sector, prospects of Horticulture must be explored. The condition of weather and the height from sea level effects agriculture, as with the increase of height growth decreases.

Therefore, the study of agriculture in regional economy is important, as the local differences arise due to available natural, social, economical and technical conditions. The suggestions have been presented with the intentions that it will lead to improve the means and methods for the growth in rural economy. Economic policy after independence emphasized central planning, with the government setting goals for and closely regulating private industry. Self-sufficiency was promoted in order to foster domestic industry and reduce dependence on foreign trade. These efforts produced
steady economic growth in the 1950s but less positive results in the two succeeding decades.

This succeeded mostly in terrain areas and rural areas particularly hills were untouched. Five years planning remained invisible. Nine Five Year Plans have completed and tenth five years plan is going on but there is yet no effect on Garhwal Himalaya regions. These plans have failed to remove regional imbalances. There were no provisions for hill agriculture; as a result, the agriculture condition is deteriorating. “Agriculture production plan” introduced in third five years plan, but it was of no avail. Study reveals that ‘Agriculture production plan’ was not introduced in this region.

Scholars like A.D. Pant, P.P. Dhyani and N.S. Bisht has underscored the importance of regional planning for the fast development of hill economy.
On internationally many economists have studied regional planning and suggested extra planning, German scholar Christlar, Betly lance and Bandbill Mirddle, Perox and Walter Ezard expressed their suggestions on this problem.

For the regional development following steps could be useful:

i) Determination for achieving developmental aim.

ii) Plannig in accordance with available natural resources.

iii) Use of human resources.

The development of hill economy will only possible when development schemes are implemented with all good intentions and determination. Besides, development process will start with land reforms.

Selection of the Area of the Study

There is diversity of climate and land formation in this region due to hilly area. Topographically, this hill area is situated in the lap of Himalaya. Erstwhile Uttar Pradesh government had divided this area in two main administrative units, Garhwal Mandal and Kumaun Mandal. These Mandals consist of Almora, Pithoragarh, Nainital, Pauri, Tehri, Uttarkashi, Chamoli, Rudraprayag, Dehradun districts respectively. This area is backward in the field of agriculture that is clear from the annual reports of Parwatiya Vikas Vibhag.

The district Pauri taken a subject for the special study because it represents all the characteristics of vast hilly area of the state. Its agriculture
fields are situated at the height of about 300 to 2000 meter from sea level. This height is suitable for the study of productivity of labour and agriculture at various heights of the fields. Which has not been done till now.

**Aims of the Study**

Agriculture is result of human interaction with nature for his survival. This inter-activity varies according to topographical, social and economic conditions.

The low produce is the hallmark the district Pauri though Maximum population is engaged in agriculture. The study aims at to find out the factors responsible for this slow down and present suggestion there for.

Objectives of the study are as follows:

i) To determine the production and potentiality of agricultural produce in the area.

ii) To identify factors determining agricultural development.

iii) To determine the share of agriculture produce in per capita income.

iv) To ascertain the economic development of the region through agriculture.

v) To bring-out some suggestions for enhancement of agricultural produce in the area.

**Method of Study**
Selection of district Pauri as a subject of study is significant as it represents all economic and social characteristics of hill of Uttranchal.

For the present study, both analytical and descriptive methods have been adopted. There is due incorporation of secondary data and published unpublished literature. Those secondary data and facts that are not available arranged as primary data.

It is well known that agriculture of district Pauri is very much affected by the climatically conditions. From many earlier studies, it is clear that height is best medium to express various natural components. Generally, with the increase of height, the slope of the land increases. Temperature falls down and forests area expends which gradually decreases and finally reaches to a stage where there are very few trees. Forest extent varies from place to place. Generally, with the increase of the height availability of agricultural land and means of irrigation decrease and pressure of population increases.

Thus, villages were taken at variant heights. Five percent villages selected in each category. The identification of the medium, marginal and landless agricultural farmers was established. Various economic, non-economic facts were collected, and statistical methods were adopted for the analysis. In addition, one questionnaire prepared to obtain primary and secondary data.

The period of 2004-05 is the base year of the survey. The success and failure of agriculture was estimated with economic survey of this year.
Collection of Primary Data

According to variant heights, the area of the study has been classified in three major divisions, 61 villages from First Land Division, 60 from Second Land Division and 36 from Third Land Division were studied. In each division, 5% families interviewed.

Thus, for sampling the 157 out of total 3137 villages chosen. Questionnaires divided in two parts, first contained information of area, population, number of families, education, health, drinking water, transportation and agricultural facilities etc. And second contained information regarding working population, agriculture structure, use of agriculture land and productivity, crop cycle, consumed tendency, market surplus, food-grain exchange, natural condition of agriculture land, soil, forestry, agriculture instruments and technique, quality seeds and manure, financial aid, agricultural progress in planning period, soil test, means of income of families and income from industries.

Collection of Secondary Data

The critical study of climate, human and land resources of the district conducted. The collection of secondary data were taken from Department of statistical, Revenue, Agriculture of Pauri. This study done with statistical and analytical methods. The agriculture analysis conducted at regional level. After this calculation, suggestions provided.