**Name Imad Ahmad**

**ID 16082**

**Sec A**

**Department Civil Engineering**

**Semester 2nd**

**Effect of highways roads on agriculture:**

Agriculture plays an essential role in the economic development process of the least developed countries such as Pakistan. Besides providing food to the nation, agriculture frees labor, saves savings, contributes to the marketing of industrial goods, and earns foreign exchange. Agricultural development is an integral part of overall economic development. Land transport plays an important role in agricultural development. This is because it is the main means of transporting agricultural products from farms to markets as well as to different urban communities.

Road infrastructure development is a must for agriculture, overall economic growth, as well as an improvement in the quality of life. Better methods can reduce transaction costs associated with agricultural activities and thus can reduce costs of obtaining inputs, increasing production prices, and allowing entry into new and more profitable activities. Governments often participate in other dimensions of agricultural activities, and there is a strong case for governments to make these investments due to the nature of the public benefits of the roads. Public investment can play several roles in creating the enabling environment needed to stimulate agricultural growth.

Road transport is the backbone of Pakistan's transportation system, accounting for 90 percent of national passenger traffic and 96 percent of freight traffic. Over the past ten years, road traffic - from passengers and goods - has grown much faster than the country's economic growth. The national highway and expressway network with a length of 10,849 km contributes 4.2 percent of the total road network. It holds 90 percent of all traffic in Pakistan.

Pakistan, with a population of approximately 156 million people, has a reasonably developed transportation system. However, compared to other developed and developing countries, Pakistan's road density is low. This fact is documented in Figure 14.1. The use of road density (total road length / total area) is a commonly used indicator of road system development, which is often used as an indicator of prosperity, economic activity, and development. Pakistan plans to double the current road density of 0.31 km2. Km to 0.64 sq km. How much gradually over the next 10 years

**Effects of buildings on agriculture:**

The demand for building land will take 30 million hectares of production.

A study concluded that by 2030, the world could lose millions of fertile farmlands to city expansion, with Asia and Africa accounting for 80 percent of total agricultural losses.

When analyzing satellite data on farmland and productivity using the year 2000 as a reference point and comparing it with the 2030 urban projections, international researchers found that 30 million hectares of cropland would be lost to developing cities - an area equivalent to the Philippines. Asia and Africa will lose 24 million hectares of major agricultural land.

As cities become hubs for economic activity, large-scale changes are expected. However, the authors say that this is the first study to determine the impact of urbanization on croplands at the global, continental and country levels. The study was conducted by researchers from Austria, Germany, Sweden, New Zealand and the United States. The productivity of agricultural land that will disappear by 2030 has about twice the global average and accounts for about 3-4 percent of global crop production in 2000.
China, India, Nigeria, Pakistan and the United States are due to lose the largest agricultural land due to urbanization. The productivity of rice, wheat, corn and soybeans is likely to be affected, although there are significant differences at regional levels

.

Among continents, Asia will see the greatest loss of agricultural land, with China alone accounting for a quarter of the world's agricultural crops. India, another fast growing economy, is not expected to lose much, although the scenario may change when urbanization increases. Pakistan, Vietnam and Indonesia are also the main potential losers. While these changes threaten the livelihoods of small farmers and retailers, more serious consequences for forests can be seen.
On the one hand, there is agricultural land consumed by urbanization, and on the other hand, new land for agriculture is likely to replace forests or other ecosystems of value at relevant levels, says Felix Kreutzig, head of the land use, infrastructure and transportation group. At the Mercator Institute for Research on Global Commons and Climate Change in Berlin, Germany, who participated in the study.