

Agricultural Development through Agriculture Mechanization

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Agriculture and its allied sectors have an important contribution to the overall development of the Indian economy. The agriculture sector not only ensures food security for the general public but also provides various and adequate means of employment. The increasing production cost of farmers, increasing wages of labourers, shortage of agricultural labourers, and low profit relative to cost remain a permanent and serious problem. It is also important to note that all the activities of agriculture are time bound if they are not done on time; the farmers have to face a lot of problems. Like: - Lack of mechanical efficiency is also a major factor in this problem.

Farm mechanization is an important investment in modern agriculture. It also increases productivity apart from reducing the cost of human labour or cultivation. Mechanization is also helping in other dimensions of resource use efficiency, safety of agricultural labour, improvement in quality and value addition of agricultural production. Modern agriculture earns more income than traditional agriculture and agriculture is becoming a means of better life instead of just being a means of livelihood. Looking at the expansion of agricultural holdings in India, about 84 % of the holdings are less than 1 hectare. Special efforts are needed in agricultural mechanization to increase productivity in agriculture in view of holding.

According to World Bank estimates, most of the rural population will become urban by 2050, which will reduce the agricultural labour force from 58.20 percent in 2001 to just 25.70 percent by 2050. Personnel availability in agriculture has increased from 0.043 kW/ha in 1960/61 to 0.077 kW/ha in 2014.



The increase in workers in agriculture is very less as compared to the growth of tractor. In order to catalyze the quick and continuous development of agricultural mechanization in the country, the Ministry of Agriculture, Government of India and State Governments have developed new schemes from time to time, such as sub-mission of agricultural mechanization, custom hiring service, National Agricultural Development Plan, National Food Security. Missions, subsidy for specific machines, and NABARD loan schemes are the main schemes to promote mechanization by the central and state governments. Kisan Bandhu is available on rent agricultural machinery such as combine harvester, sugarcane harvester, potato combine harvester, paddy transplanter, land leveller, and rotovator. By taking advantage of these services, farmers can also increase their income and save time.

Central Government Schemes Promote Mechanization in Agriculture:

- ✚ **Sub-Mission of Agricultural Mechanization:** To promote mechanization in the country, a special dedicated scheme, the Sub-Mission of Agricultural Mechanization, was launched by the Government of India in 2014–15.



The main objective of this scheme is to make agricultural machines accessible and affordable to small and marginal farmers through the establishment of custom hiring centers. It also provides for the distribution of agricultural equipment and machines at various



subsidized rates to the farmers and to create awareness among the stakeholders through demonstrations on the operation of machines and skill development of farmer.

- ✚ **Custom Hiring Center:** In this scheme, together with the Central and State Governments, through this scheme, many other agricultural machinery including tractors are made available on high subsidy, its purpose is to increase the agricultural areas and reduce the cost of cultivation by focusing on agriculture in small and medium farmers. At the cooperative societies and gram Panchayat level, custom hiring centers provide agricultural implements on rent at affordable rates at 80 percent subsidy, which the needy farmers can use on rent for their farming.
- ✚ **Rashtriya Krishi Vikas Yojana:** The Rashtriya Krishi Vikas Yojana is the main scheme of the state government, through which a 100 percent subsidy is given to the farmers. This scheme was launched by the government on 29th May, 2007. Its objective is to develop agricultural dimensions keeping in mind the agricultural climate, natural resources and technology. On the basis of this, plans are prepared for the states and districts; their purpose is to develop agriculture keeping in mind the agricultural climate, natural resources and technology.
- ✚ **National Food Security Mission:** Its purpose is to improve old machinery instead of buying new machinery, contribution is provided by the government, its purpose is to reduce the cost of new machines by farmers and farmers can take advantage of this scheme.
- ✚ **Subsidy for specific machines:** Farming machines are important to make agricultural work easier although the cost of machines is high. To increase the participation of farmers in buying new machines, the government provides 90 percent subsidy to women in buying land conservation machines such as tractor, rotovator, tractor straw baler, laser hand leveler, and paddy transplanter.
- ✚ **NABARD Loan Scheme:** Under this scheme, 30 percent subsidy is provided on the purchase of tractors, and up to 100 percent subsidy is given for other agricultural machinery. In this way, agricultural machinery becomes easily available to farmers for farming, which increases their production and productivity in the cultivated land area.



How to get Kisan Bandhu grant:-

Kisan Bandhu Grant can be obtained in two ways: first direct cash subsidy, second indirect cash subsidy, direct is a form of cash, which is very useful for farmers, while indirect subsidy is agricultural income tax free. It is important to note that some important documents are required to avail subsidy on agricultural machinery. These include the most important Aadhaar Card, Voter ID Card, Account Details, PAN Card, Contact Information, Name, Date of Birth, Application Form and Payment Receipt.

Advantages of Mechanization in Agriculture:-

- ✚ **Improvement in technology:** Better irrigation of soil, land improvement, and prevention of soil erosion are important. By using machines, not only more land is plowed but by removing deep-roots weeds and cultivation becomes more extensive.
- ✚ **Development of rural infrastructure:** The mechanization of agriculture changes the social protection in rural areas and reduces the cost and increases the profit of the farmers.
- ✚ **Change from traditional agriculture to commercial agriculture:** Mechanization in farming methods results in a change from subsistence farming to commercial agriculture not only with higher productivity but also with the help of international markets for sale.
- ✚ **Shortage in agricultural labour:** In modern times, despite having good qualifications, farmers migrate from rural areas to cities in search of jobs, due to which there is a shortage of laborers. The use of farm machines such as interculture and power tillers can reduce labor dependency Proper use of land: Better use of agricultural land due to mechanization, fuel for animal power, in this way, because of better use of mechanical power, the profit from agriculture increases more.



- ✚ **Increase in agricultural income:** Mechanization can increase the income from agriculture manifold and along with improving the economic condition of the farmer; it helps in changing the standard of living and agricultural business and social economy.

Conclusion:

Most farmers in India are still dependent on traditional methods of agriculture, while mechanization in agriculture is taking India toward the dimensions of a new revolution. At present, farmers are changing their position from traditional farming to commercial agriculture. Due to which the farmers are getting successful in earning more profit. Due to low profit relative to the cost of farming, high wages and time-bound work of all farming activities; one has to face losses due to shortage of laborers. Due to the lack of information about the machines, less information about the schemes of the government, etc., the farmer brothers can get less benefit. The main reason for all these problems is the lack of awareness among the farmers, and in order to increase the income of the farmers, the government will have to make the farmers aware of the schemes to reach their schemes to the farmers. So that farmer brothers can take maximum share in the schemes and by getting subsidy on agricultural machinery from the schemes, the farmer brothers can not only reduce their cost but also earn more profit and become farming professionals.