



Skilled Human Resource: Need of Farm Mechanization

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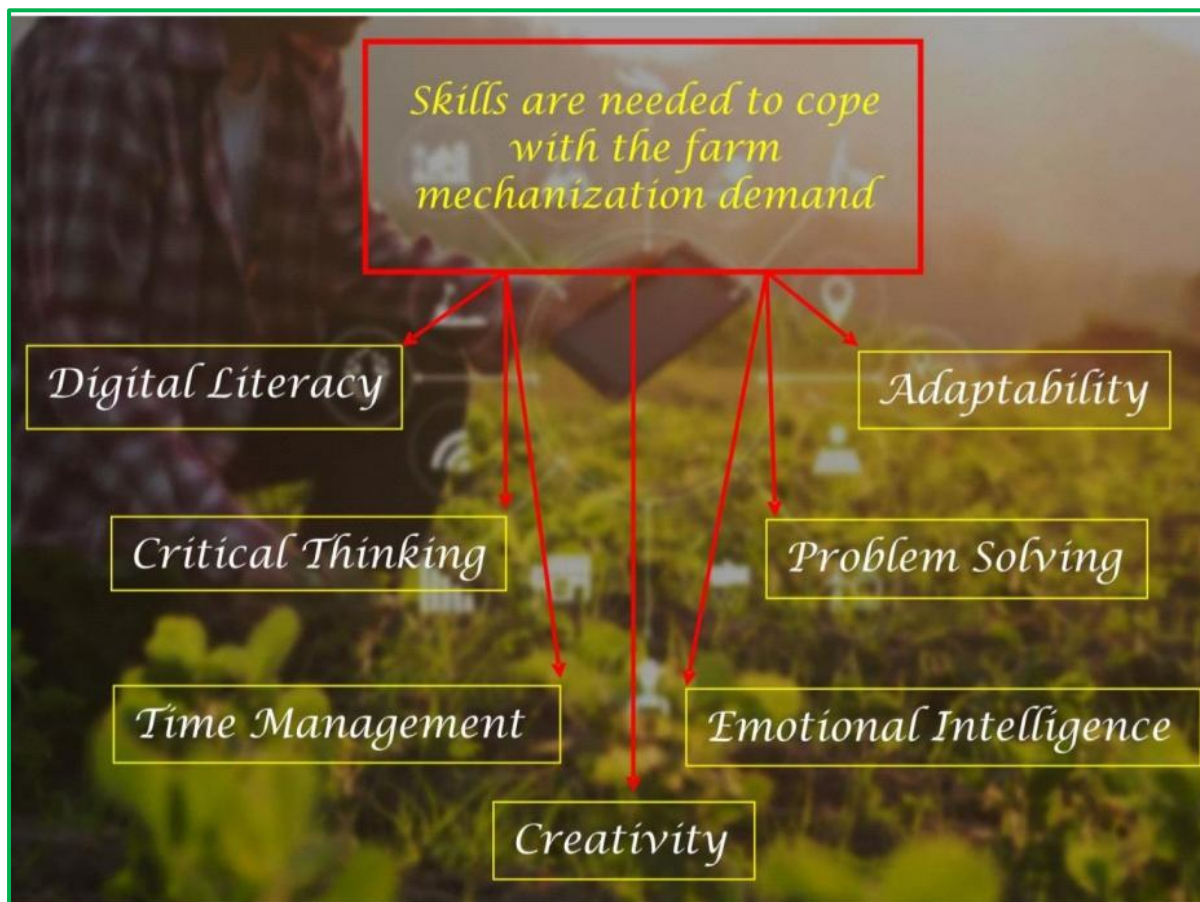
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The agriculture sector in India has witnessed a considerable decline in the use of human power in agriculture related activities. The trend has paved a way for a range of agricultural tools. A large number of these are driven by fossil fuel operated vehicles such as tractors, diesel engines. This has resulted in a shift from the traditional agriculture to a more mechanized agriculture. Employment Guarantee Act and huge demand from the construction sector in cities. Labour is available at a higher cost per hectare and this would increase the demand for mechanization. It has been observed that the percentage of agricultural workers to total workers in India has been gradually declining and it is expected to further decline to 25.7% by 2050 leading to severe farm labour shortage. Only about 40% to 45% of agriculture in India is mechanized. The penetration is lower with the small and marginal farmers who own land less than 5 hectares. Thus, there is a lot of potential for increasing the penetration of farm mechanization and therefore growing the need of mechanization and skilled human power required for that. Farm mechanization requires skilled and well-trained personnel to use various energy sources and improved farm tools and equipment to increase productivity, cropping intensity, precision and speed of harvest. Efficiency of various agricultural inputs and reduce losses at various stages of agricultural production. The combination of skilled humans and agricultural mechanization is a requirement of contemporary agriculture to increase productivity and overall production at the lowest possible cost.

Skilled Human Resource In agriculture, tasks are usually executed manually because it is impossible to automate every aspect of farm work. This results in labour being the most important operating expense for a plantation or large farm management. Hence, precise labour tracking is an indispensable factor for agriculture. Skilled human resource or manpower refers to the person who is trained, well-educated, experienced, devoted to their field and is capable of doing any specific work in a balanced way and efficiently. Management of farm machinery and human resources can have a great impact on the productivity and profitability of agriculture business. They are extremely helpful to farmers, right from planning and scheduling operations perfectly to tracking and controlling processes across the entire plantation. Technical education and skill development are two essential capabilities that required to secure India's long-term growth in mechanized world. It is important to create competent skilled human resources to fulfil the potential of agriculture sectors for mechanization. Agricultural workers with advanced skills are needed to meet the demand of the industry. The agricultural sector is made up of many components. Consequently, a profession in this field can be divided into a variety of job types, ranging from technology to management, as well as physical work. Technical education and skills development are two critical



capabilities that need to be cultivated to ensure India's long-term growth in today's global environment. It is important to create competent human resources to preserve, diversify and take advantage of the potential of agricultural value chains. Agricultural universities must make the development of agricultural human resources a continuous process.



Benefits of skilled human resource in farm mechanization

- More efficient use of land and other natural resources, labour and capital in agriculture.
- Conservation of soil and other natural resources essential for agriculture.
- Increasing efficiency, production and yields in agriculture and improving the quality and preparation of agricultural products and their proper processing on the farm in order to facilitate their marketing and, in particular, to raise the nutritional level.
- Improved income, standard of living, job opportunities, working conditions and prospects for the development of agriculture as a contribution to redressing the imbalance between agriculture and other occupations in these aspects.
- Promotion of mechanization, where appropriate, and safety in agricultural work, and lightening of the tasks in agriculture, in particular for women and children.
- Achieving an adequate balance of employment between agriculture and other branches of economic activity.
- Provide appropriate career guidance to rural youth.
- Encourage an adequate number of young people to enter various fields of agriculture, where appropriate.
- Overcome the problems of seasonal unemployment and underemployment in agriculture.
- Bridging the gap between technical developments that affect agricultural production and their use in practice.
- Improvement of rural life in general and promotion of greater satisfaction in agricultural work.

Duties of skilled human resource in farm mechanization

Selection of Machinery: Agricultural equipment and machinery must be selected in a way that is compatible with all the agricultural needs of a farmer. Choosing the right farm machinery brings multiple benefits to farmers that also allow them to protect themselves from operating expenses, generate more profit and grow more crops with less effort

Farm Power Management: Agricultural machinery can help farmers increase their productivity and production, while allowing them to carry out agricultural operations in a timely manner. Cropping intensity is improved and farmland becomes more financially viable by producing a second crop or multiple crops in the same area. Various integrated farming system possible from mechanization.

Maintenance of Machine and Repairing:

To minimize costly breakdowns, thorough maintenance and precise repairs are necessary to keep farm equipment running smoothly and reduce the cost of mechanization.

Innovative Technology Adoption: The adoption of technologies is influenced by the development, diffusion and application of existing and innovative biological, chemical and mechanical techniques at the farm level, all of which are included in agricultural and other inputs; it is also influenced by education, training, advice and information, which form the knowledge base of farmers, but are still necessary

