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IMPACT OF TECHNOLOGY ON AGRICULTURE: HOW TECHNOLOGY CHANGE THE FARMER'S PRODUCTIVITY AND THEIR LIFE

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INTRODUCTION

In agriculture the effect of technology is absolutely crucial in very vast areas. Technology has changed the various aspects of agriculture like machine technology, animal production, tech plants, land use, food and fiber processing with the help of technology. Farmers can reduce the risk for their crop's failure, and they can take a better decision with the help of technology in respect of changing weather or climate and source soil fertility and its productivity. Contribution of agriculture in India's GDP is about 18%. To contribute to this point, technology has played a vital role, by using the technology farmers can get to know about fertility and the quality of soil and essential aspects which are important for farming, and they can gather the knowledge about which type of crops is best for more productivity according to their soil fertility and climate condition of their area.

Technology is playing a key role in increasing productivity and as well as the income of the farmers and it helped to reduce the cost of production and time consumption by the use of agricultural equipment. Farmers can reduce the cost of manpower in farming in compared to traditional farming it helps to improve the efficiency of their work and productivity of crop. The use of fertilizers and pesticides helps to increase productivity, income and food security. Agriculture is backbone of Indian economy it provides the employment for large number of people directly and indirectly, for them agriculture is a major source of revenue and livelihood. About 58% of the Indian population dependent on the agriculture. Instead of agriculture is giving the highest number of employments to Indians it is being highly unorganized sector also ignored. And there are also small farmers are uneducated farmers faces the number of problems in use of the modern equipment like how to use them and in what quantity should be used in so that it cannot have any inverse impact in the fertility of soil or productivity.

Agriculture is the most important sector for food providing and cheapest source of raw materials to various industries. The supply of food is most essential issue in the in India. In India about 16% of the total population are unable to take a proper nutritious diet and cannot afford the healthy lifestyle. India

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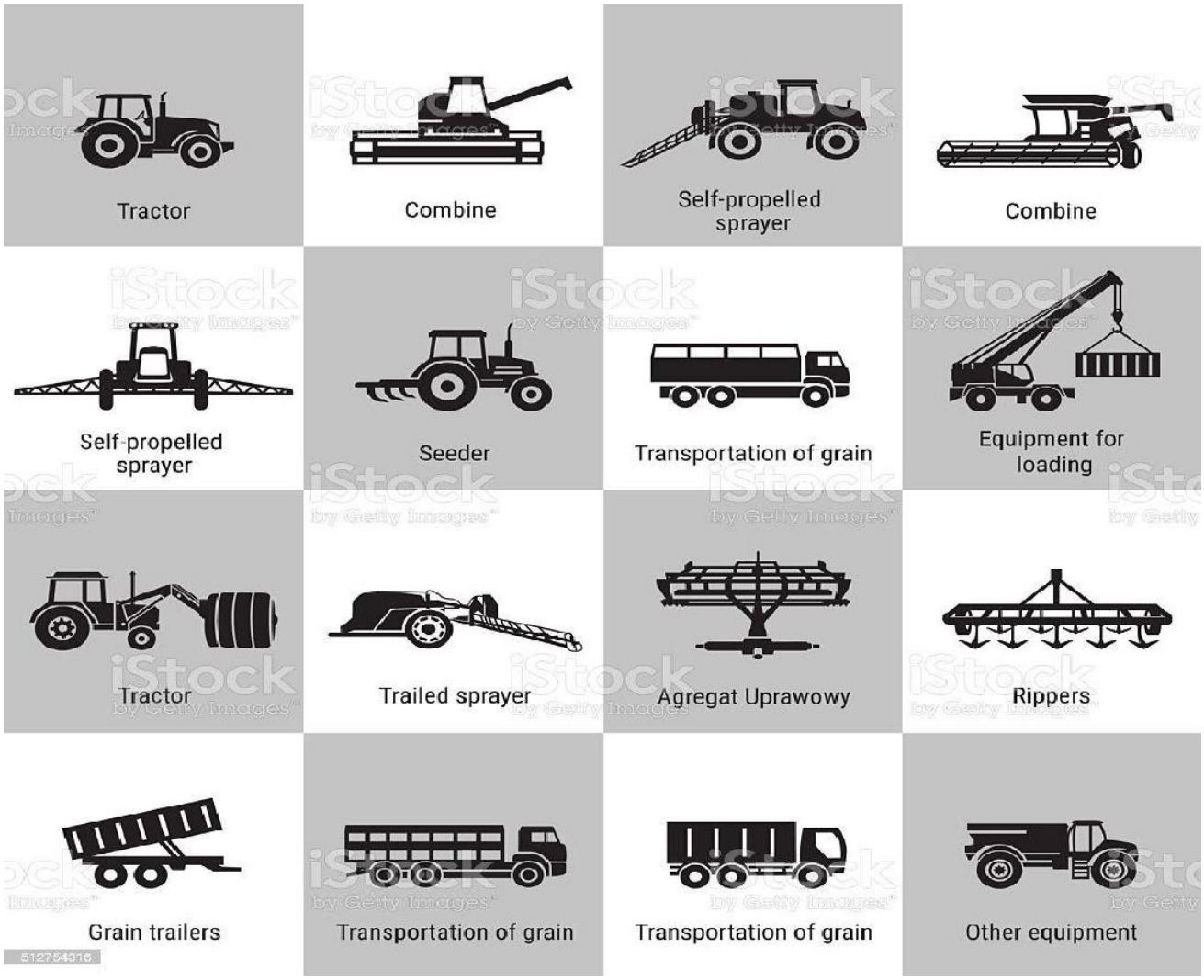
has a big challenge in terms of the population. And there has been some limitation in terms of availability of water and manpower. Using technology farmers can Tackle their problems but where some problems in the use of these technology and use of modern equipment of farming for small farmers is very expensive. And use of more and more chemicals and pesticides to increase the production of crops is harmful for the consumers in the long term, it leads to some types of disease.



LITRATURE REVIEW

Modern technology has played a key role in transforming the way of farming crops and its productivity. It increased the employment efficiency in production of food, saving on time and reduction in cost. With the help of innovative technology farmers can gain more profit by farming. It is also a business and entrepreneurship which is fully dependent on nature. There is always a higher risk and challenges that cannot be avoided. There are some problems which are related to climate. And in agriculture there has the highest cost of manpower which demands for the better technology and equipment to reduce

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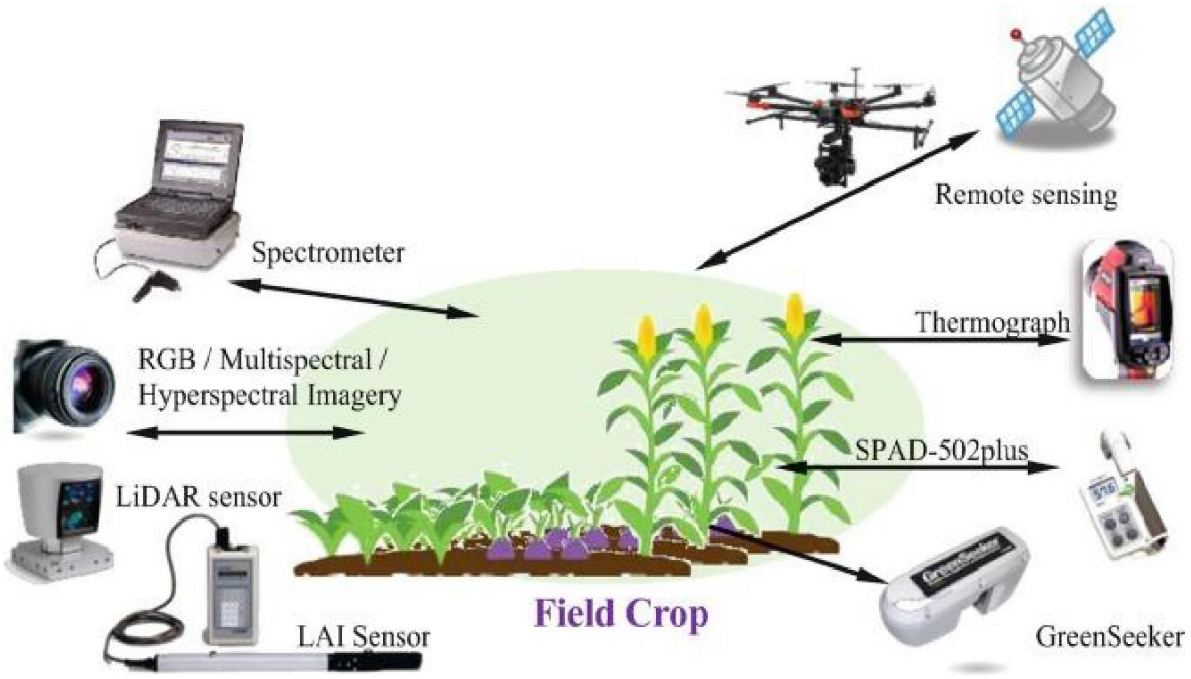
this cost. The innovation of machines such as combined, harvester, tractor etc. Which helps to reduce the cost of the labour.

Enhancement Research in Agriculture: For sustainable forming practice farmers can take the help of technology it reduces their carbon footprint and prevents soil degradation like by using the pesticide in agriculture. Farmers can reduce the amount of chemicals. Technology can also provide the market demand, efficient use of resources and information. Farmers can take the help of technology to reduce the risk and improve efficiency. Smart supply chain management by using technology farmers can connect with the buyers and build their supply chain reducing waste and improving profitability.



DAT: It helps to provide real time information to farmers about their crop's sensors can measure the moisturizing level of soil and it helps to reduce the consumption of water. Adoption of DAT's is already underway in India.

Digitalization in Agriculture: Digitalization in agriculture refers to the use of new and advanced technologies which help the farmer to connect to the digital world. Digital agriculture helps farmers to understand the difference between different regions to their crops production and practices. And it helps to get more ideas and knowledge about farmers from different regions and countries by connecting them digitally. And it helps to get real time market information to nearby as well as the far away. It helps to increase farmers' productivity and knowledge about their farming and crops.

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Smart Farming: Smart farming refers to the application of modern information technology for farming. India needs to do some changes from traditional method to smart farming method. As per the data, the world population is going to reach 10 billion by 2050. Providing proper nutritious food to every person is a big challenge for the government. And it is impossible with the less cultivable and traditional farming methods, to overcome these problems such as crops failure, crops damage, loss of productivity, and wastage. To achieve we have to adapt smart technology in agriculture.

Weather Forecasting Techniques: Changes in climate are the most important factor in change in agriculture. But with the help of new technology like big data we can analyze the past change in climate and its impact. And we can predict the changes which will happen in the future and will affect agriculture.

Crop Management: There are many seasonal and biological factors which influence crop protection. To protect from the pests, fungus and other disease, solution is needed to develop new chemicals and pesticide which are helpful for crops to protect you from pests and many kinds of diseases, and it helps to increase the production and decrease the crops damage.

Role of UAV: UAV is a kind of technology which is made by using aerospace engineering and sensory technology, like drones. It helps farmers too many ways like detailed view of crops, high regulation cameras image, and inspection of pests and fungal infections in crops. And it also helps to spray the chemicals and medicines properly in crops. It reduces time consumption and increases efficiency.

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Advantages

- Modern machines can help the farmers to do their work easily.
- Easily it helps to reduce time consumption.
- It helps to minimize the cost of production.
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- Technology helps the farmers to get a better market price of their crops.
- Technology helps to control pests, fungal infections and many kinds of diseases by using chemicals and pesticides.
- Application of synthetic fertilizer.

Disadvantages

- Huge amounts of chemicals reduce the fertility of the soil.
- The cost of maintenance of the machinery is very high.
- More and more use of machines could be harmful for Environment.
- The use of pesticides chemicals is harmful for consumers and leads to many kinds of diseases.
- Lack of skill to use modern machines.

Objectives: The objective of this paper is to develop the better understanding about technological effect on agriculture and in farmer's life.

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CONCLUSION

It clearly can be observed that after technical use in agriculture farming and production has a massive difference from earlier in every aspect of agriculture. It helps to reduce the former tedious workload and makes it easy to do and efficiently in very less time. It improves their production and efficiency. It improves their production and efficiency. It helps to give them a better and right price of their products by connecting digitally to the marketplace. It helps to reduce the risk from weather and climate change by the technological use it is possible to get the real time information and take the right decision for their crops. Through technological innovation in terms of chemicals and pesticides it is possible to protect the crops from pests and kinds of diseases and fungus. With the help of technology farmers can analyze the big data of past changes and improvement regarding agriculture and take the decision in spite of this there are some gaps between the easily not understandable technology and their decision-making.