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Big Data in Agriculture

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Introduction

Big data in agriculture refers to the huge amount of data generated from various agricultural farm implements or sources like sensors, satellite, weather stations etc. This data is highly essential for processing and analysis, which gives valuable information related to farming practices. By using this, farmers can take better decision related to farm management practices.

Various sources of Big data in Agriculture

These are the various big data sources for agriculture.

- Sensors
- Satellite
- IoT Device

- Drone
- Farm Machinery data
- Weather monitoring device

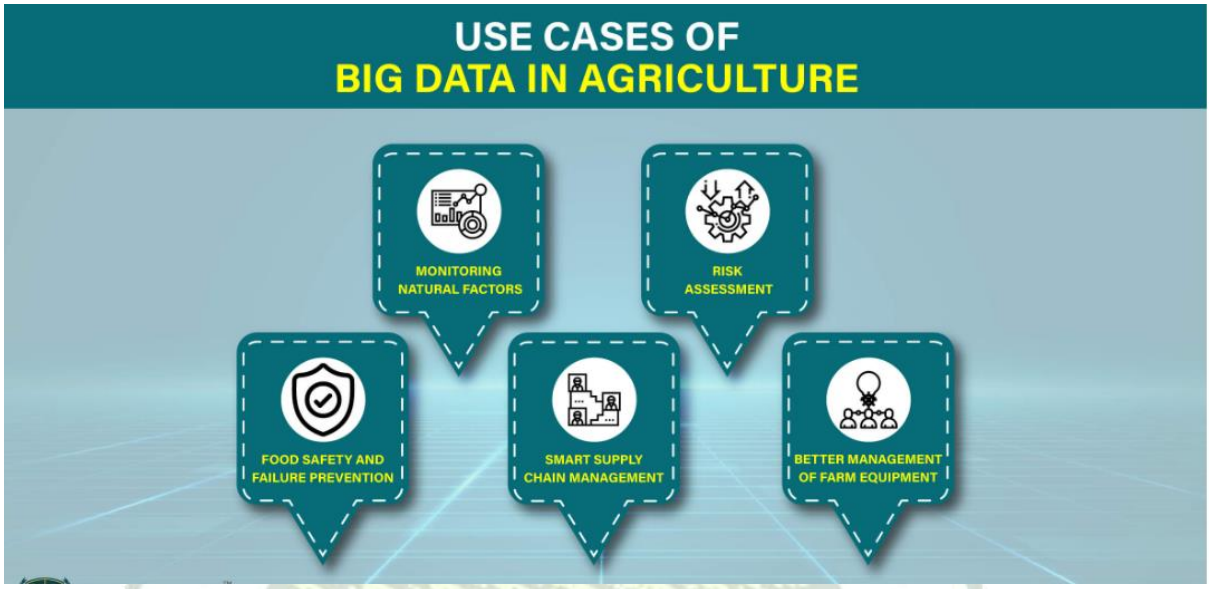
Examples of Big Data-

- ❖ Weather data
- ❖ Satellite data
- ❖ Environmental data
- ❖ Market data
- ❖ Genomic data
- ❖ Soil data

Use of Big data in Agriculture

- Big data plays a very important role in Agriculture mostly in the smart farming and hi-tech farming approaches.
- Precision farming generally uses the big data for different purpose
- Data on soil, weather and market plays a vital role for the farmers in the crop cultivation aspects.
- Crop yield prediction needs a larger amount of data related to area, production and productivity.
- Weather forecasting also needs a larger amount of historical data related to various weather events.

- Pest forewarning also requires a massive set of data related to pest and disease incidence.



Advantages

- Increase in yield
- Optimizing the resources
- Saving of operational costs
- Improved decision making

Major challenges include the high initial cost and skilled man power to handled the data. Data privacy and security also plays an important key factor