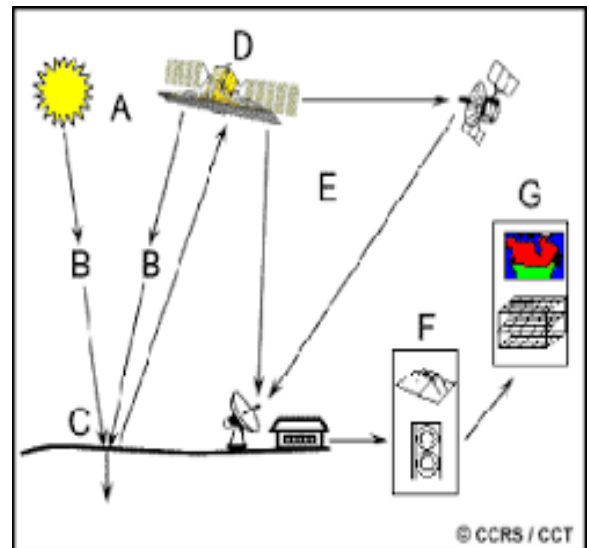


## What is remote sensing?

Remote sensing is the science of obtaining information about an object or phenomenon without contact with it.

### Elements involved in remote sensing:

- A) Energy source or illumination
- B) Radiation and the atmosphere
- C) Interaction with the target
- D) Recording of energy by the sensor
- E) Transmission, reception
- F) Interpretation and analysis
- G) Application



### Types of remote sensor

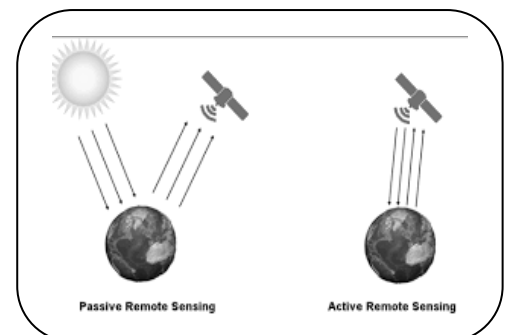
1. Active sensor
2. Passive sensor

An active sensor sends out its own signal then measured when it is reflected by the Earth's surface. A passive sensor detects solar radiation that is reflected or released by objects on the surface of the Earth.

### Application of remote sensing in agriculture:

#### 1. Determining the soil moisture content:

Active and passive sensors of a satellite in space are used in order to determine soil moisture content. Many earth sciences such as water cycle, flood are based on the content of soil moisture



**2. Crop production forecasting:**

Remote Sensing is used to predicting crop production and yield over a given field and determine how much of the crop will be harvested under the specific conditions. The researcher can predict the crop quantity that will be produced in given farmland over a given period of time.

**3. Determining crop damage and crop progress:**

In the event of crop damage or crop progress, remote sensing technology can be used to penetrate the farmland and determine exactly how much of a given crop has been damaged or under stress and the progress of the remaining crop in the farm.

**4. Drought Monitoring:**

Remote sensing technology is used to monitor the weather patterns including the drought patterns over a given area. The information is used to forecast the rainfall patterns of an area and also tell the time difference between the current and the next rainfall which can be helpful to keep track of the drought.

**5. Predicting weather conditions:**

Climate and weather data systems are essential if you want to make crop management decisions and schedule irrigation. Additionally, this data can also help you prepare against natural disasters. This application of remote sensing in precision farming has provided spatial coverage to predict upcoming weather conditions successfully. With this data's help, you will be provided better predictions of crop needs and help cut down unwanted costs.