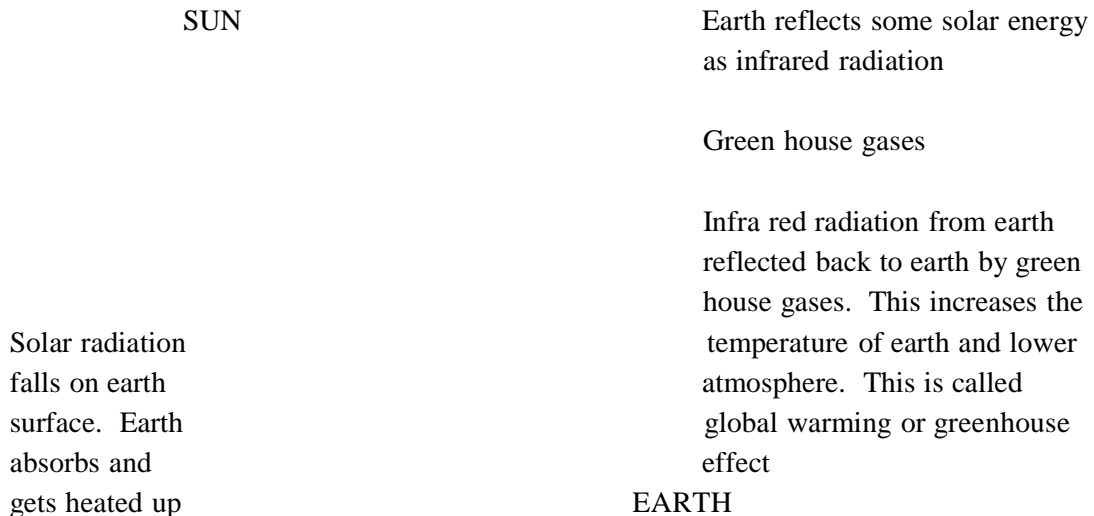


Lecture 26: IMPACT OF GLOBAL WARMING ON PESTS

What is global warming?



- Warmth from sun heats the surface of the earth
- Earth absorbs most of the energy but reflects back some energy in the form of infra red radiation
- Greenhouse gases (e.g. CO₂, Methane, CFC (Chloro Fluoro Carbon), Nitrous oxide) present in atmosphere trans the infrared radiation and reflects back to earth
- This reflected energy falls on earth and also lower atmosphere and keeps it warmer (Heats the earth's surface)
This is called global warming or green house effect.

Effect of global warming on world and agriculture

- Increase in overall temperature on earth (e.g.) Earth's surface temperature has increased 1.4°F in 1st one century (Forecast: 5°F rise in next century)
- Change in climate tremendously
- Melting of ice in Polar region
- Increase in seas level and submerging of coastal areas
- Flooding and intense down pours
- Drought in warmer regions

Impact of global warming on pest status

1. Due to change in climate, temperature and water availability, the farmers may change the type of crops grown.
2. Due to increase in temperature, there can be outbreak of certain insect pests and diseases.

3. In forest areas there will be a shift in tree species and also pest species.
4. In agriculture lands since cropping pattern is changed new crops to suit the climate is introduced and new pests are also introduced.
5. When water availability is less, crops will be raised as rainfed. It will be difficult to take up control measures without water.

Sources of green house gases

Developed countries : Emission from Automobiles and factories contain CFCs

Developing countries : Deforestation causes rise in CO₂ level Methane gas
from paddy fields and livestock Nitrous oxide from
'N' based fertilizer