

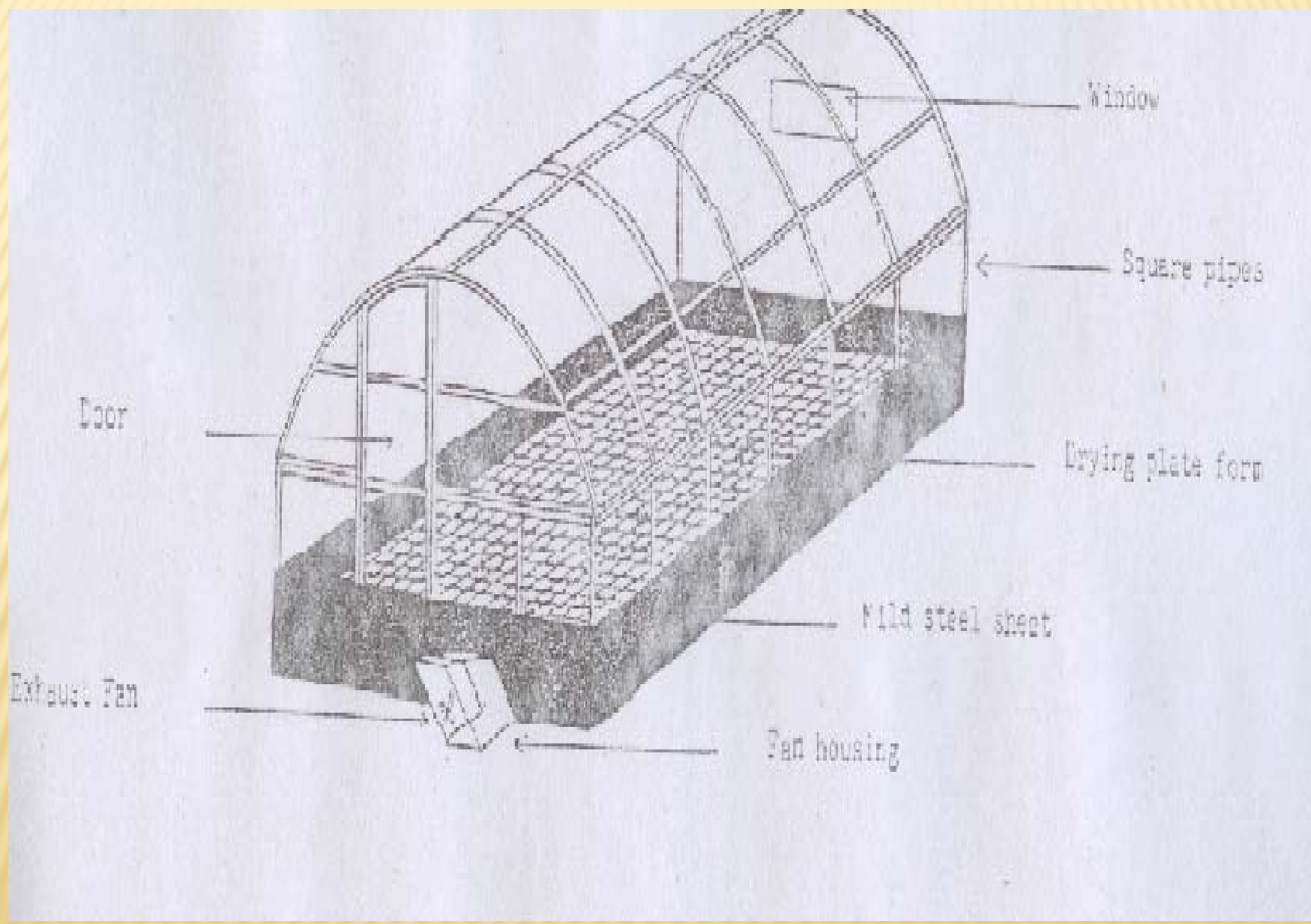
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SOLAR ENERGY HARVESTING FOR CROP DRYING

Sun – Big Source of Energy

1 m² receives \cong 1 HP

Now it depends how humans use it ?



FEATURES OF DRYER

- Parabolic Solar Dryer
- Covered with polythene
- Floor area 16.3-m²
- Maximum height 2.19 m
- Drying platform 28 cm above the ground
- An inlet window
- Door to facilitate loading



FEATURES CONTD.....

- Air chamber underneath drying platform
- Exhaust fan for desired air circulation
- Dryer was oriented, at zero bearing with north-south axis.
- Experiments conducted using a parabolic concentrator with the inlet window
- Concentrator to increase heat gains, drying rates etc.

SOLAR CROP DRYER - BENEFITS

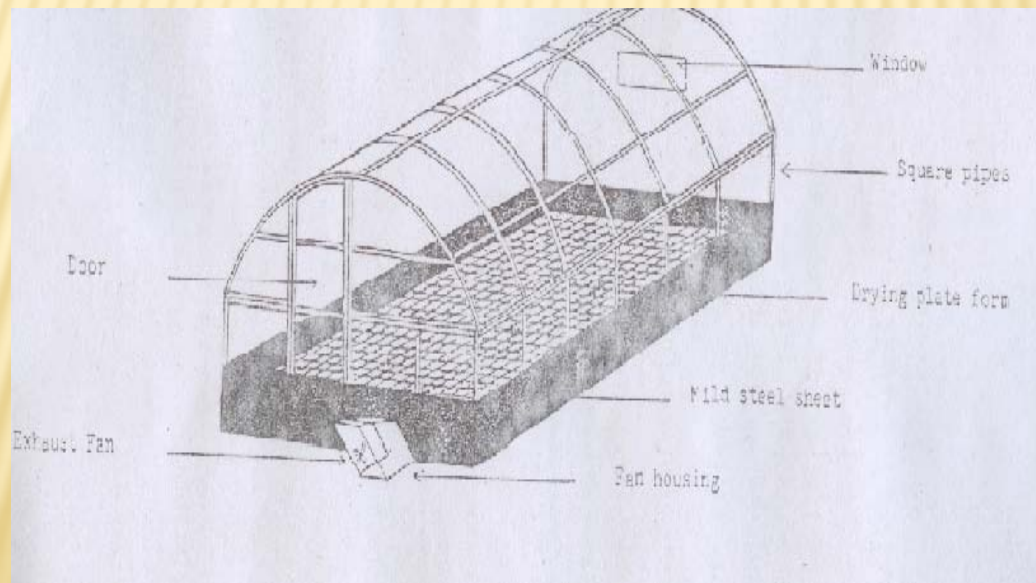
- A parabolic solar dryer clad with
- **Dryer temperature of 68 °C obtained at midday with outside temperature at 37°C.**
- Various crops such as wheat, maize bitter gourd, chilies and apricots .
- **Dryer twice as fast in drying as open sun**

COMMODITIES DRIED

- Maize
- Rice
- Bitter gourd
- Apricots
- Chilies
- Sorghum fodder

ROLE OF PARABOLIC CONCENTRATOR

- ✘ Improved drying efficiency
- ✘ Shifting problematic



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THANKS